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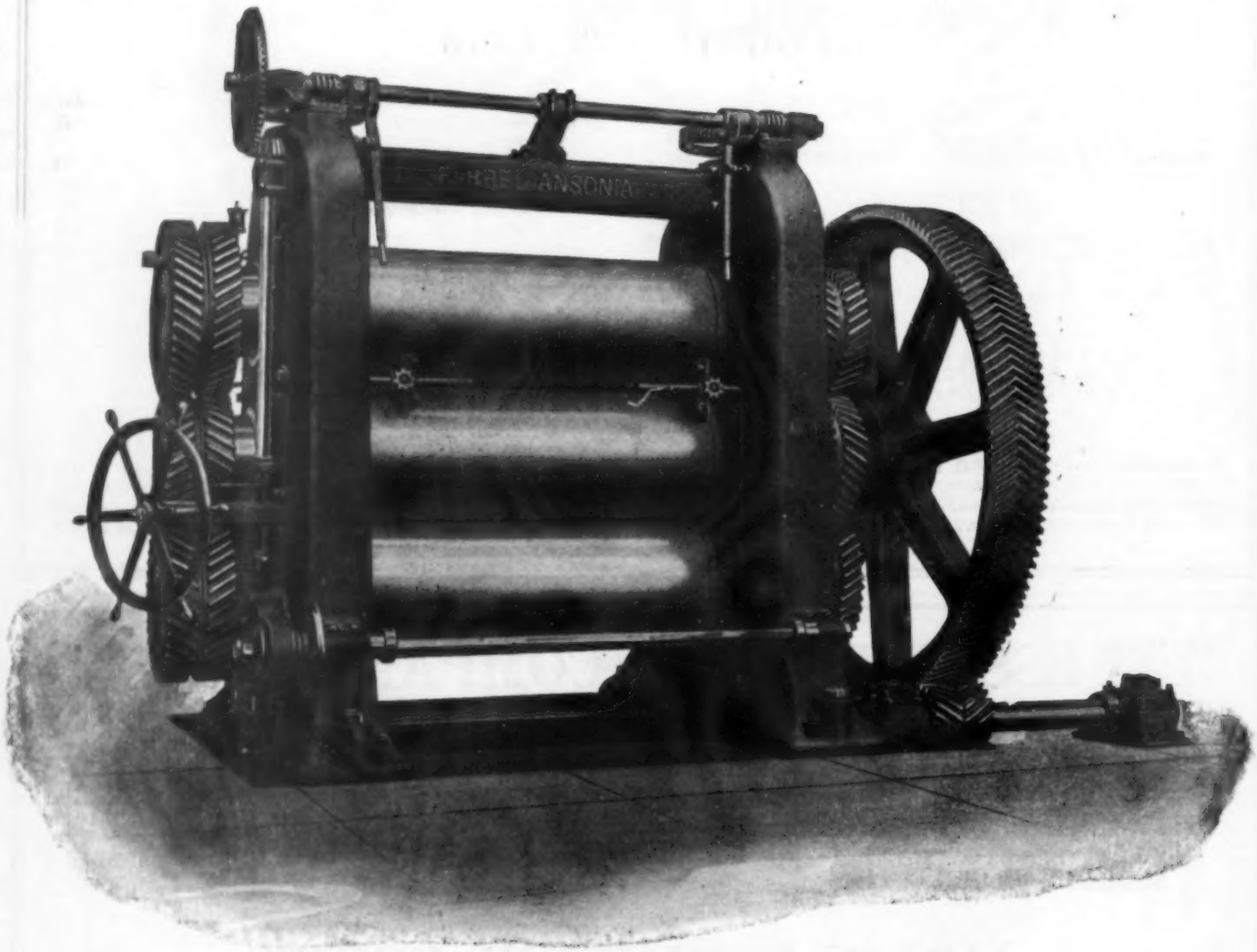

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THE RUBBER AGE AND TIRE NEWS

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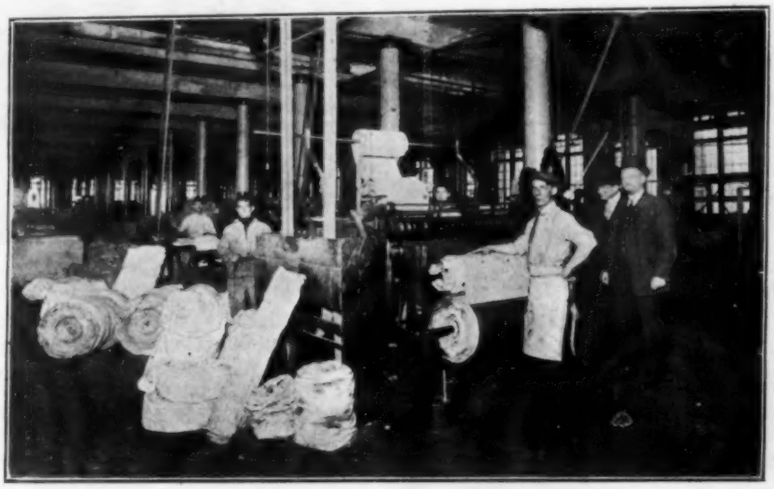
Relative Merits of Rubber and Balata Belting

By D. Repony

"That Balata belting is better than rubber, leather, or even cotton belting for every purpose is not true. Where water, acid, or acid fumes are present, it is however better than any other. It will not stand high heat, but on the other hand, the moderate heat developed by running a balata belt softens the gum a little and brings it to the surface, thus renewing the belt cover for a long time. It should never be used in rooms that are over 100 degrees in temperature, nor is it advisable to use it where it is constantly exposed to steam.

"Properly made balata belting is possessed of great tensile strength and its pulling power is wonderful. It clings to the pulley better than any other material and needs no belt dressing. It also has the added advantage of running true. Furthermore no belt fasteners are needed in splicing. In making a joint the ends are simply heated until they become loose and sticky. The splice is then made on an angle of 45 degrees, stepped in about one inch to each ply, pressed down hard and ironed. When cooled it is as strong at that point as it is at any other.



CUTTING FABRIC FOR RUBBER BELTS

"The use of balata belting is very large for conveying purposes in mines but especially in acid works, dye houses, bleacheries, ammonia works, slaughter houses, tanneries, breweries, and also in shoe and hat factories, and in special chemical industries."

This statement, which was made in an article by Hancock Haskins on "Balata Belting" in a recent issue of a European rubber journal* prompts the author to make a few remarks concerning his experience with balata belting. The author does not wish to criticise Mr. Haskins' views, merely wishing to publish the experience he gained in the course of more than a year devoted exclusively to research and e periment-ing on belting.

Rubber Superior to Balata

In the course of the author's experience in the rubber industry, he has found that the supposition that balata belting is superior to rubber belting prevails among those who have not had competent experience with the various kinds of belting. He will endeavor to show in this article that balata belting has absolutely in no respect any advantage whatever over good rubber belting, and that on the contrary, balata belting presents a number of disadvantages that do not occur in rubber belts.

In the first place it is claimed that balata belting wears better than rubber in wet places, in contact with acids, acid fumes, ammonia, and the like. Let us consider how balata belting really acts when subjected to a searching and impartial investigation.

Nobody can deny the fact that balata will withstand certain acids and chemicals better than will rubber. Vulcanized rubber, especially when the compound is poor, will also absorb more water than will balata. It is because this fact is recognized that balata is used in preference to rubber in submarine cables. However, this in no sense decides conclusively in favor of balata belting. As a matter of fact, balata, like rubber compound, is used in belting as a medium for holding the fabric plies together, and though either of a balata or a rubber belt appears to be a solid mass, both are built up units, as is shown in Fig. 1.

Fig. 1 shows, as clearly as it is possible to do so by photography, a piece of belting from which the cotton fabric has been completely removed by chemical means, leaving the rubber (balata would be left in the same way) skeleton in the shape of a perforated structure, through the perforations of which any liquid or gas could diffuse. This clearly shows how liquids and gases can diffuse through the surface of belting, the cotton duck acting as an absorbing medium.

Absorption Test

In Fig. 2 is shown a piece of plain rubber belting, of which 24 inches are immersed in water in such a manner that absorption can only take place through the surface. The author allowed this piece of belting to remain in this position in water for six days and nights, and found that after this treatment three and one-half ounces of water had been absorbed. Plain balata belting subjected to the same test, during the same length of time, absorbed four and three-quarter ounces of water. Now, supposing that the liquid absorbed had been an acid instead of water, it is clear that a

* The India Rubber Journal, May 24, 1919.

balata belt would have gone to pieces just as well as a rubber belt, even though the balata itself might eventually be less affected than a rubber compound.

Therefore, it is neither the balata nor the rubber in a plain

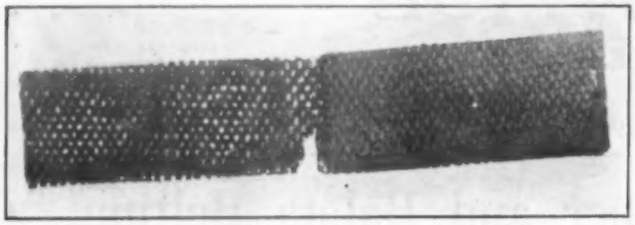
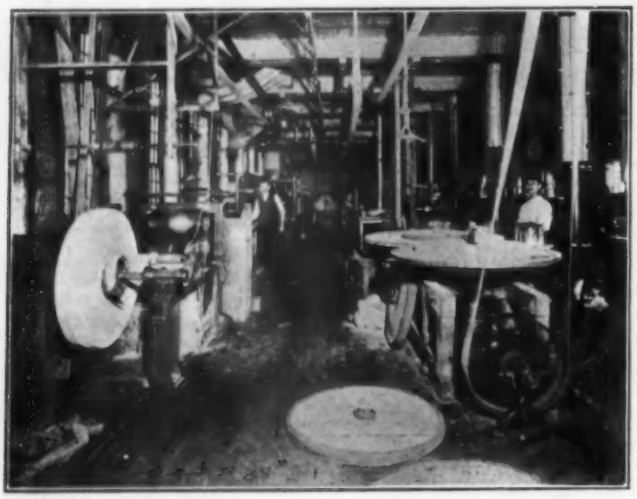


FIG. 1

belt that absorbs water or other injurious liquids, it is the cotton duck that absorbs them.

Realizing this fact, most belting manufacturers make rubber covered belting in a way that prevents the duck from absorbing liquids or gases. When balata belts are made with a balata cover the latter peels off in use, adhering to the belt pulleys and causing lumps on them. In ageing balata belt coverings made of balata have a much greater tendency to dry out and crack to pieces than do belt coverings made of vulcanized rubber.

It is, therefore, an absolute mistake to claim that balata belts are waterproof, acidproof, etc. Anyone can convince



MAKING BELTS BY MACHINERY

themselves of this by taking a piece of balata belting, weighing it when dry and then weighing it again after it has been immersed in water for some time.

Driving Qualities

As to the statement that balata belting clings better to the pulleys than any other belting, and needs no belt dressing, this is only true after the belt has been in use several days, and then only where the drive works under ideal conditions. As soon as a balata belt is subjected to hard driving and especially in cases where the belt, at certain points, slides on the pulley, the heat generated by the friction melts the balata, and the latter sticks to the pulleys, forming lumps and making the belt run irregularly.

On another hand, if a balata belt is working at a temperature equal to the freezing point of water it becomes as stiff as a board. None of these disadvantages occur with rubber belts, for vulcanized rubber is but slightly affected by extremes of heat and cold.

Further, balata belting will not "stand up" at all when subjected to fast drive over pulleys of small diameters, for the heat generated by internal friction resulting from deflection ruins the belt in a few minutes. Tests we have made have shown that, while 5-inch 6-ply rubber belts can be run for over 80 hours on pulleys 4 inches in diameter, turning 1200 revolutions a minute without being damaged in the least, a balata belt working under the same conditions separated in all its plies in less than five minutes, due to the heat generated by internal friction on deflection, melting the balata.

As to the statement: "but on the other hand the moderate heat developed by running a balata belt softens the gum a little and brings the balata to the surface, thus renewing the belt cover for a long time," this is a completely wrong supposition.

In the first place the amount of balata between the plies is so small that there is hardly anything to come to the surface and very little can continue to come to the surface over any length of time. Furthermore, the author's experience has been that when balata belting is working under condi-

MAKING BELTS BY HAND

tions sufficiently severe to create enough heat by internal friction on deflection to soften the balata, the belting becomes worthless, due to the separation of its plies, before the balata can flow to the surface.

Balata's Worst Feature

From the innumerable experiments the author has made with balata belting, he has come to the conclusion that the worst feature of this belting is the one above referred to, namely, that it is very sensitive to variations of temperature.

That manufacturers of balata belting must experience considerable trouble from this source is evidenced by the fact that they make special belts for use in northern countries and others for use in warm climates.

It has been of interest to the author to determine in which

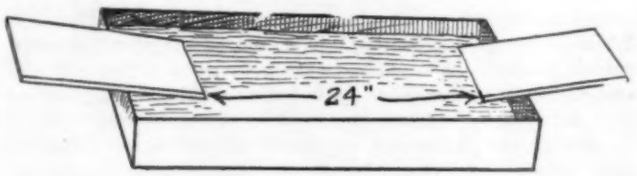
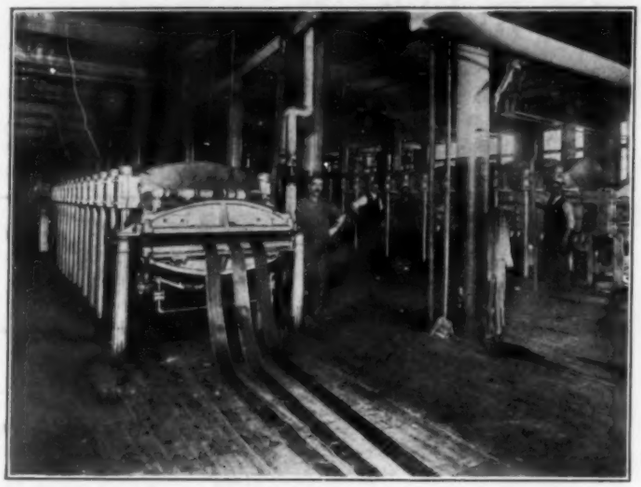


FIG. 2

particular point the different qualities lie which determine the advantage in either direction.

Naturally when we expect any difference whatever in quality we must seek it in different softening and melting points of the balata used in the particular way.

Investigation has shown us that in a belting made for hot climates the balata softened at a temperature of 142 degrees F., and that consequently a temperature of 142 de-



PRESSING BELTS

grees F. would spoil this balata belting almost instantly.

In a belt made for northern countries we found that the balata became soft at 110 degrees F. and that at 134 degrees F. the balata melted. The difference in the melting point of the balata of these two belts is, therefore, very small, yet in some cases it may be sufficient to become a factor in the wearing qualities of the belting.

However, the expressions "Belt for the North" and "Belt for the South" cannot possibly amount to much, for the reason that the "Southern" belt might well have to work in a hot engine room or on a fast drive in Alaska and not be able to stand the service, while a "Northern" belt might stand up well in a shady or cool place under the Equator.

Of course, there is no doubt but that balata belting under ordinary conditions, such as a slow drive and on a large diameter pulley, will give good service. However, under the same conditions, even the cheapest rubber belt will do just as good, and under very severe conditions of service, where high grade rubber belting will give excellent results, a balata belt will not stand up at all, even though it may be of the best grade.

The Uses of Glue as a Compounding Material

By A. B. Kempel

Of the Rex-Hide Rubber Mfg. Company

Probably one of the most interesting compounding materials it has been the writer's fortune to become familiar with, is glue. There seems to be no end to the variety of attractive experiments that can be made to determine the best methods of its use and its relative value as compared with other materials. Equally interesting are the wide variety of opinions as expressed by the most competent rubber chemists as to its properties and value. What follows is merely the conclusions arrived at by the writer as the result of his experience and is not to be accepted as final or conclusive.

Our first experience with glue was brought about in 1914 by a desire to obtain a gasoline-proof material cheaper than shellac. The glue was softened with water, the sticky mass worked into the rubber and vacuum dried. We did not obtain the toughness or strength that was expected and after considerable work found that as soon as the water was added to the glue a decomposition set in that continually weakened the glue the longer it was in contact with the water. When we speak of weakening or strengthening glue we mean as determined by results in rubber compounding and not by the usual methods of glue testing. We also found that it was impossible to remove all the moisture by vacuum drying and consequently the finished mixture also deteriorated in storage.

Our next experience with glue was in the manufacture of fibre soles. It was this line that demonstrated the abrasion resisting, aging and accelerating properties of glue. During this time we developed a method of combining glue and rubber, which we felt gave us the maximum results that could be obtained with the use of glue. We were able to produce soles that showed a remarkable resistance to wear especially on the toes and edges. We were able to cure these soles in eight minutes at seventy-five pounds to a non-blooming point without the use of any other accelerator. We were able to maintain this cure for over a year without any appreciable variation in the free sulphur content which was under constant control, and samples of those soles, now nine months old, show no sign of aging and can be cut, and bent double without cracking. This compound contained 16 per cent. of glue by weight and 14 per cent. by volume.

Glue can be used to great advantage in a variety of mechanical goods if its characteristic properties of resistance to oil, gasoline, and abrasion, its light gravity (1.47) its accelerating action, its absence of color and its property of stiffening a stock are borne in mind.

Glue is the only compounding ingredient of a light gravity that will stiffen a stock, that can be used in large quantities, that can be easily worked on a mill, and that will not dry up the batch. As high as thirty per cent by weight, thirty-two per cent by volume of glue can be used in white stocks and not affect the color.

Glue can be used to advantage in all hard rubber articles that are cured in tin or in molds. It cannot be used in open steam cures.

Glue can be used to advantage in boots and shoes made by the dry heat method. It produces a compound which is very dense and will practically overcome all troubles due to air blisters, besides greatly increasing the life of the soles and heels.

Glue cannot be used to advantage in inner tubes as it has no properties that are desirable or necessary in that item. Furthermore, glue will produce a decided grain in a pure gum stock which would not be desirable in tubes.

In solid tires glue can be used to advantage to replace zinc oxide. Several manufacturers are using up to ten per cent by weight of glue in their compounds with advantageous results.

In pneumatic tire treads, glue will produce a very dense stock, will increase the resistance to abrasion and will make a tire age better. With its use the proportion of gasblack used can be greatly decreased which will bring blessings and an increased production from the mill room. Manufacturers of both black and white tread tires are using up to eight per cent of glue on the weight of the compound with good results.

It has been definitely proven in recent auto races that glue will not break down under any heat a tire can be subjected to in service. It has also been proven that a tire can be made better at less cost with the use of glue than it can be made without glue, that is provided the proper grade of glue is used and it is combined with the rubber in such a manner as to obtain the maximum results.

The rubber trade will use approximately seven million pounds of glue this year as against half that amount used two years ago. The number of tire companies using glue has more than doubled since January first of this year.

Saving Cotton Fabric in Rubber Factories

By L. Earl Henneman

Much cotton fabric is uselessly wasted in rubber factories.

In a plant turning out about fifteen hundred automobile casings and 3000 inner tubes a day that has come under my observation, the average cost of cotton goods used for wrappers, liners and similar purposes will average at the present time from $7000 to $8000 a month. About a third of this expenditure can be saved by proper supervision of the use of cotton cloth and wrappers. Every rubber manufacturer should have a man working on this important problem.

In a plant of the size above mentioned fully 500 yd. of cotton fabric goes to waste each day in the shape of towels, aprons, shoe rags and the like. About 800 yd. of wrappers, liners and similar articles are wasted by needless cutting and tearing, and another 1000 yd. are scrapped by thoughtless workmen.

The wastage of towels and the like can easily be eliminated by the adoption of proper disciplinary measures. Nevertheless,

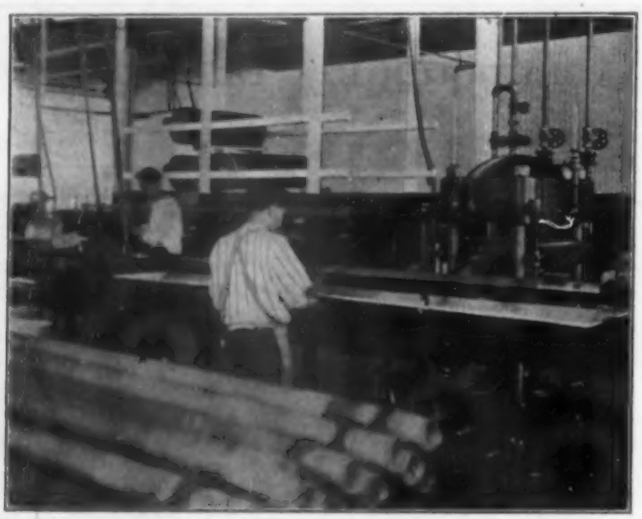


FIG. 1 WRAPPING INNER TUBES

there is excessive waste of these in fully 80 per cent of American rubber factories.

The needless cutting of wrappers is caused by the men who roll them on the spindles not being careful and not seeing that they are rolled straight and smooth. This operation should be accomplished perfectly, as it is impossible to wrap inner tubes properly if the wrappers are twisted and wrinkled, especially if the operators of the wrapping lathes are on a piece-work or bonus wage basis and are inclined to be careless.

Tearing of cross wrappers can be minimized by eliminating the vibrating of tension bars of the lathes and by having all mandrels kept straight. The best kind of a tension bar is a solid iron bar about 3 in. in diameter or a wooden block.

Straight jackets are usually torn in stripping. The jacket should be steamed before any attempt is made to pull it off. It then should be pulled off with a steady pull; not by jerking, and if it is well soapstoned before the tube is vulcanized it will come off with ease.

Wrappers frequently rot because they are thrown on the floor or in barrels or boxes while still wet. This condition can be eliminated either by using them at once or putting them on racks.

All wrappers should be soaked in water containing a soapstone solution for at least one hour before being used. This prevents scorching and prolongs the life of the wrapper from two to four heats. Great care should be exercised in rolling the 3 in. tape on the spindles, paying particular attention to smoothness and eliminating all wrinkles and twists. They then should be put in a box or carton and not thrown upon the floor.

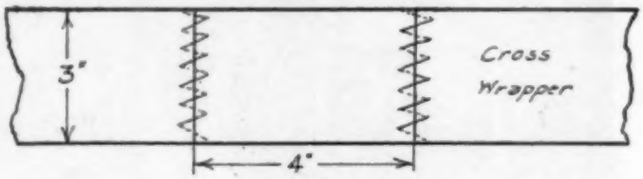


FIG. 2

They should be run through a solution of soapstone each time they are re-rolled.

Wrapper Sizes

Size of tube	Width of tape	Length of Cross wrapper tape necessary to cover tube	Width of St. Jacket	Length of St. Jacket necessary to cover tube
28" x 3"	3"	60 ft.	14"	9 ft.
30" x 3"	3"	60 ft.	14"	9 ft.
30" x 3½"	3"	60 ft.	14"	9 ft.
35" x 4½"	3"	75 ft.	14"	10 ft.
36" x 4½"	3"	75 ft.	14"	10 ft.
37" x 5"	3"	75 ft.	14"	10 ft.

From the above table it can readily be seen that any tube can be covered by a 25-ft. cross wrapper, and that a ten-foot straight jacket will satisfy all conditions. However, two pieces of tape used as a cross wrapper will not cause seam marks or cause inside blemishes on the tube. In this way any piece of tape ten yards or over can be used in wrapping inner tubes. Pieces from 6 to 10 yd. can be used in the hose department, when there is one, as wrappers and straight jackets for radiator hose. This gives the company another chance to completely wear out the tape before it is sold as scrap rags at three or four cents a pound.

Wrappers which are too small to use can be washed, ironed and stitched together on a sewing machine. The best style of a seam to use in order to prevent seam marks and blemishes is the seam illustrated in Fig. 2.

Two ends are overlapped about 4 in., and the stitch, which is ¼ in. long will cover up the seams, producing the best working surface obtainable. The Singer Sewing Machine Company furnishes a seam-lapping attachment which increases the speed in sewing this tape.

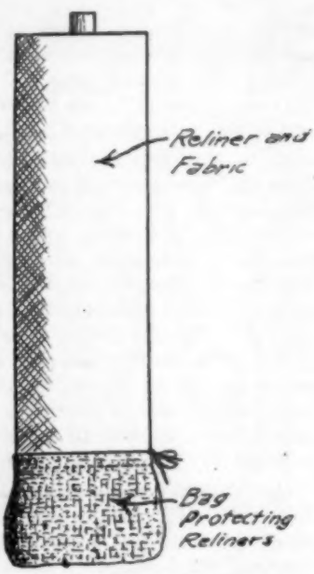


FIG. 3

All scrap should be inspected before it is sold as waste, as very many long pieces which could be used are sold as scrap. Mandrels when they lie on the trucks in intimate contact with one another cause the wrappers to become weak and tear easily.

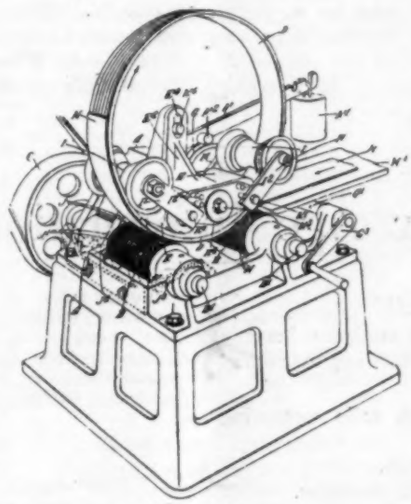
The average life of a cross wrapper is 18 heats on inner tube work, while a straight jacket will last about 26 heats. After this they are usually scrapped. The average texture of tape is 72 x 35, and the tensile strength is 98 to 100 lb.

Waste pieces of heavy duck can be made into bags, which can be used to protect reliners which are stood on end, and in this way protect their life, as is shown in Fig. 3.

Applying Hard Rubber Base to Foundation Bands

Solid rubber tires usually comprise a steel foundation band, or base, which is grooved or otherwise formed on its outer surface, to which is vulcanized a hard rubber or vulcanite strip on which the resilient portion or tread of the tire is vulcanized. It has been proposed to apply the hard rubber strip to the foundation band by passing the strip between the outer surface of the band and two rollers supporting the band while a pressure roller bears upon the inner surface of the band at a point between the two supporting rollers to cause the hard rubber to adhere to the band. In this arrangement the application of the pressure at a point between the points of support is likely to cause distortion of the band and may as a result cause imperfect adhesion between the strip and the band.

According to a new invention patented by the Dunlop Rubber Company, Limited, London, England, the pressure for causing the hard rubber to adhere to the band is applied on the inner surface of the band at the points coincident with or adjacent to the points of support afforded by the supporting rollers. For this purpose there may be provided, in the case of two supporting rollers, two pressure rollers situated within the band which bear upon the inner surface of the latter at points coincident with or adjacent to the points of support. The pressure applied in this manner is, therefore, not liable to distort the band, and by means of this arrangement a satisfactory adhesion of the strip to the band can be obtained. Means are also provided for moving the pressure rollers into and out of contact with the inner surface of the band and means whereby the supporting rollers which are driven by suitable gearing to rotate the band, are unclutched from the driving gear prior to the moving of the pressure rollers out of contact with the band, so as to avoid or prevent the liability of air being trapped between the band and the strip as it might occur if the pressure were removed too soon. Means are also provided for guiding or correctly supporting the band and such means may comprise for example flanged guide rollers bearing against the inner surface of the band, the flanges on the rollers lying adjacent to the sides of the band and thus insuring that the band is correctly supported and that the strip is correctly positioned on the band. Suitable means may also be provided for trimming the edges of the strip during its application to the band.



Solid Tire Building Machine

Letter *A* in the accompanying Fig. 1 represents the base or main frame of the apparatus. *B B* represent the supporting rollers which are knurled on their outer surfaces and are secured on shafts B^1 mounted in bearing in the frame *A*, and adapted to be rotated by means of a suitably driven pulley *C* disposed at the rear of the apparatus on one of the shafts B^1 which shaft has a friction or other gear wheel B^2 (see Fig. 2) operatively connected by a belt or chain B^5 to a similar gear wheel B^3 on the other shaft so that when the pulley *C* is clutched to the shaft B^1 rotation can be imparted to both the shafts B^1 and their rollers *B* in the same direction. *D* is the foundation band which may be grooved or otherwise formed on its exterior surface, and which is supported vertically by its lower part resting upon the two supporting rollers, *B, B,* the band being rotated by the rotation imparted to the supporting rollers *B, B,* and their shafts B^1, B^1 *E E* represent the two pressure rollers disposed within the band *D* and rotatably mounted on pins E^4 fixed in a frame E^2 which is supported or mounted on a crank pin E^3 medially placed between the two pressure rollers, *E, E,* and connected by a crank to a crankshaft *Ex* suitably supported in the frame *A*. Connected or keyed to the crankshaft *E* is one end of a lever or arm *F* adapted to be weighted at its other and free end as required by a movable weight F^1 the position of the lever arm *E* being controlled or determined by means of an adjustable cam *G* adapted to engage with a projection F^2 on the lever *F*, so that the lever may be set to a position in which its weight causes the crank to move and force the frame E^2 downwardly so that the pressure rollers are forced or pressed into contact with the inner surface of the band. The cam *G* can also be set to raise the weighted lever, which through the crank connection raises the frame E^2 so that the pressure rollers are moved out of contact with the inner surface of the band. Fig. 2 indicates the parts in this position.

In order to effect these adjustments, the cam *G* is secured on one end of the shaft G^1 having at its other end a crank handle G^2 by means of which the cam can be angularly moved in one direction or the other to raise or lower the lever and thus move the pressure rollers out of or into contact with the inner surface of the band. The vulcanite or hard rubber strip *H* is supported and guided along a table H^1 so as to pass between the exterior surface of the band and the supporting or driving rollers *B*, the rotation of which causes the band *D* with the strip *H* adhering to rotate, the necessary pressure for effecting adhesion of the strip *H* to the band *D* being applied by the pressure rollers *B, B,* when acted upon by the weighted lever *F*. The rotation of the band *D* and the application of the strip *H* continues until the band *D* is completely encircled by the strip *H*. The pressure exerted by the rollers can be removed by actuating the cam *G* so as to raise the lever and the frame E^2 carrying the pressure rollers. In order to ensure that the pressure rollers *E, E,* shall not be raised prior to the stopping of the rotation of the band *D*, a suitable clutch is provided which is adapted to engage with the pulley *C* and to be actuated by a pivoted lever operated against the action of a spring by a cam device on the shaft G^1 when the latter is angularly moved by the handle G^2. The arrangement is such that before the cam *G* is moved by the turning of its shaft G^1 to raise the weighted lever *F*, the pivoted lever is actuated by the cam device to move the clutch out of engagement with the aforesaid pulley *C* so that the shafts B^1 and their rollers *B* no longer rotate. The continued operation of the handle G^2 eventually causes the cam *G* to move the weighted lever *F* and raise the pressure rollers.

By means of this arrangement the rotation of the band *D* can be stopped at any time during the application of the strip, and as the pressure is not removed until after the stoppage of rotation, the liability of air being trapped between the band and the strip (as might occur if the pressure were removed too soon) is prevented. The frame E^2 suporting the pressure rollers is provided with a slot E^4 in which the pin E^5 fixed on part of the frame *A* projects so as to allow for the necessary up-and-down movement of the frame, but to prevent at the same time undue tilting of the frame about its crank or supporting pin. The frame E^2 may carry two flanged rollers *I* by means of pivoted arms I^1 the guide

rollers *I* being adapted to bear by their own weight on the inner surface of the band with their flanges projecting against each edge or side of the band. The guide roller *I* can be moved away from the band into an inoperative position by angularly moving the supporting arms I^1 until they rest against stops I^2 on the frame E^0. The guide rollers *I* may be readily removed to enable different diameter rollers or rollers of different widths to be fitted to suit various widths of bands or the rollers may, as indicated in Fig. 1, be of stepped or coned formation to suit various widths of bands. Means for trimming the edges of the strip during its application to the band may be provided and one arrangement for this purpose is indicated in Fig. 1 by dotted lines. In this case two knives *J, J,* are mounted one on each side of the band to cut the edges of the vulcanite strip after the latter has passed beyond the point of pressure. These knives are shown in the form of short bars but circular knives may be used. Supports or arms J^1 keyed to a rod J^2 carry the knives, and the supports may be adjustable along the rod to set the knives in accordance with the width of the band and strip, and the rod J^2 may be angularly movable in suitable bearings by a crank handle J^3 which can be moved through say, an angle of 180 degrees to place the knives in an inoperative position. After the strip *H* has completely encircled the band *D* the driving or supporting rollers *B* are unclutched from the driving mechanism and the frame *E*2 carrying the pressure rollers *E* is subsequently raised and the guide rollers *I* are moved out of engagement with the band so that the band *D* is left free to be removed from the apparatus. Whilst the parts are in this position a fresh band can be inserted in the apparatus. In the case of applying a strip to a band being used for a second time it may be that uneven or untrue surfaces exist on the band, and in order that the driving or supporting rollers *B* may adapt themselves to any such uneven surfaces they may be mounted on spherical surfaces formed on the shafts *B*1 in such a manner that they may slightly rock although they are so attached to the driving pins *B* as to enable them to be positively driven by the rotation of the said shafts *B*1. (British Patent No. 124,585 to the Dunlop Rubber Company, Limited, 14, Regent Street, London, factories at Aston Cross, Birmingham, England, and Colin Macbeth and Ernest Sullivan of the same company.)

The Rubber Age Information Exchange

Rubber Factory Equipment

Inquiry No. 113.—I am a consulting engineer here in England and am in the market for the following machinery for a rubber factory:

One 3-roll, single speed calender, with rolls measuring 66x18 inches.

Two 42x12-inch double geared mixing mills.

One tubing machine, to force 4½-inches in diameter.

One spreading table from 12 to 14 feet long to spread 66-inch canvas.

One autoclave press and pan, about 10 feet deep by 4 feet 6 inches in diameter.

One long vulcanizing pan, about 12 feet 6 inches long by about 4 feet 6 inches in diameter, with carriage.

Two hand-power case-making machines.

Two steam-heated drying plates for compounds.

One solution mixer.

One drum wrapping machine.

One small polishing lathe.

One studding machine.

Aluminum cores, mandrels, drums, sectional cores and one tire removing stand.

Answer: You can obtain the equipment you are seeking from the following concerns: Adamson Machine Company, Akron, Ohio.; Allen Machine Company, Erie, Pa.; Birmingham Iron Foundry, Derby, Conn.; Farrel Foundry & Machine Co., Ansonia, Conn.; John E. Thropp Son's Co., Trenton, N. J.; William R. Thropp Sons, Trenton, N. J.; Turner, Vaughn & Taylor Co., Cuyahoga Falls, Ohio; Wellman-Seaver-Morgan Company, Cleveland, Ohio.; Williams Foundry & Machine Co., Akron, Ohio.; John Royle & Sons, Paterson, N. J.; Akron Rubber Mold & Machine Co., Akron, Ohio.; Akron Equipment Company, Akron, Ohio.

Dress Shields

Inquiry No. 114.—We are large exporters and importers and one of our London clients wishes to obtain the agency for a line of "dress preservers." We would appreciate your giving us the names and addresses of reliable American manufacturers of this article.

Answer: By "dress preservers" we presume you refer to what are known here as "dress shields" and we are pleased to give you the following names and addresses of American manufacturers of this article: Brooklyn Shield & Rubber Company, Brooklyn, N. Y.; Canfield Rubber Company, Bridgeport, Conn.; I. B. Kleinert Rubber Company, New York City; Mystic Rubber Company, West Medford, Mass.; New York Shield Company, New York City, and the Onio Manufacturing Company, Middletown, Conn.

Government Tire Prices

Inquiry No. 115.—We are large manufacturers of rubber goods, but make tires on a comparatively small scale. We are anxious to know what prices the government paid last year for tires.

Answer: You do not make clear whether it is solids or pneumatic tire prices that interest you. However, the following are prices for pneumatic tires and tubes and solid rubber tires paid by the Government before the signing of the armistice.

Pneumatic Casings

28x3	—C.N.S.	Fabric	$8.15
30x3	—C.N.S.	"	9.00
30x3½	—C.N.S.	"	10.50
31x4	—C.N.S.	"	13.88
32x4	—SS. N.S.	Cord	24.29
33x4	—SS. N.S.	"	24.57
33x4½	—SS. N.S.	"	27.48
35x4½	—SS. N.S.	"	28.92
35x5	—SS. N.S.	"	36.40
35x5	—SS. Ribbed	"	36.40
35x5	—Q.D. C.N.S.	"	37.29
37x5	—SS. N.S.	"	38.06
37x5	—Q.D. C.N.S.	"	38.28
36x6	—SS. N.S.	"	55.00
36x6	—SS. Ribbed	"	55.00
36x7	—SS. N.S.	"	77.00

Tubes—Gray

28x3	$1.12
30x3	1.42
30x3½	1.72
31x4	2.21
32x4	2.29
33x4	2.33
33x4½	2.92
35x4½	2.96
35x5	3.57
36x5	3.65
37x5	3.72
36x6	5.27
38x7	8.82

Pressed-on Solid Tire

36x4	$24.25
36x5	33.35
38x5	34.37
36x6	39.90
40x6	45.00
36x7	47.35
36x10	75.85

Financial Notes of the Industry

More Capital for Kelly-Springfield and Ideal—Lee Elects Directors—New Hood Stock Oversubscribed—Keystone and Van der Linde Pay Dividends

Kelly to Increase Capital

Substantial increase in production of Kelly-Springfield tires is promised with the proposal to increase the company's capital stock to pay for the new plant that is going up at Cumberland, Md. As soon even as the first unit is completed Chairman A. L. Scheuer, of the board of directors, has pointed out, a notable addition will be possible to the volume of production that is now coming from the factories at Akron and Wooster, O., and Buffalo, N. Y. Stockholders are to be asked at a special meeting called for that purpose on July 11 to sanction an increase in the capitalization of $7,000,000, from the present $13,900,300 to $20,900,300. The fund thus created would pay for the new plant, with more than a million to spare, and leave the company's working capital untouched.

The new issue proposed by the directors is to be a second preferred, eight per cent cumulative stock. Of the total, it is planned to put out at once $5,860,200, first offering being made to present stockholders, of both the common and preferred issues. Each holder is to be allowed to subscribe for 70 per cent of the par value of his present holdings. This will mean that holders of present preferred stock, a $100 issue, may subscribe for 70 shares of new for every 100 of the old preferred held. Holders of common stock, a $25 issue, may in the same way subscribe for 17½ shares of the new second preferred, for every 100 shares of common that they hold.

A distinctly cheering note is struck by Managing Director Otis R. Cook, in calculating that larger tire plants will be needed to care for the growing volume of automobile production and use. By 1920, Cook figures the tire industry will be called on for nearly 14,000,000 tires for new equipment purposes alone.

Subscriptions to the new stock are to be met on or before August 15 at the Equitable Trust Co., New York. For purposes of this special meeting, the transfer books will close June 30, to be opened again after July 11.

Kelly Capitalization

(Special Akron Correspondence)

Stockholders of the Kelly-Springfield Tire Company, New York City, authorized at a special meeting in Jersey City a new issue of $7,000,000 8 per cent cumulative second preferred stock, thereby increasing the capitalization of the company to $20,900,300. An offering of $5,860,200 of the shares will shortly be made to stockholders of record July 17, who may subscribe at par to the extent of 70 per cent. of their holdings.

The issue has been underwritten by a syndicate composed of H. P. Goldschmidt & Co., Goldman-Sachs Co. and Lehman Bros. of New York.

Ideal Increases Capital

At a special meeting of the stockholders of the Ideal Tire & Rubber Company, Cleveland, Ohio, it was recently voted to increase the company's capitalization from $2,000,000 to $5,000,000 and to erect another factory unit to provide facilities for an output of 3000 tubes and 2000 casings a day.

Lee Increases Directorate

At the annual meeting of the Lee Rubber & Tire Corporation John M. Dettra, secretary of the company, was elected a director to fill the vacancy caused by the resignation of James W. Johnson. The retiring directors were re-elected. It was voted by the shareholders to increase the number of directors from nine to eleven, and J. C. De La Cour, vice-president and treasurer of the W. C. Schull Company, Camden, N. J., and H. C. Jones, president of the H. C. Jones Company, Conshohocken, Pa., will be added to the board as soon as the legal formalities are complied with.

John J. Watson, Jr., president, stated that the reason for increasing the board was that the management hoped to merge the Lee Tire & Rubber Company of Pennsylvania, the operating company, and the Lee Rubber & Tire Corporation of New York, the holding concern, thereby eliminating duplication of accounts and also bringing about a saving on tax payments. Messrs. De La Cour and Jones are directors of the operating company.

The output of tires last year was 225,000 compared with 244,000 in 1917, and this year plans call for 250,000. According to the general manager, the labor situation has improved. The plant at present employs about 750 men.

Hood Offers Preferred Stock

Stockholders of the Hood Rubber Company, Watertown, Mass., were recently offered opportunities to subscribe to $1,000,000 in preferred stock of the company, this issue bringing the total outstanding up to $5,000,000, the full amount authorized. It was offered on the basis of one share to each four shares held of record June 19. Subscriptions closed July 1, and payments are to be made by August 1.

The entire issue has been oversubscribed 25 per cent.

Revere Rubber Elections

The Revere Rubber Company, Chelsea, Mass., a subsidiary of the United States Rubber Company, New York City, has elected the following officers for the ensuing year: Samuel P. Colt, chairman; Lester Leland, vice-chairman; Elisha S. Williams, president; W. H. Blackwell, treasurer; John D. Carberry, secretary; F. L. Bunker, assistant treasurer and assistant secretary; F. P. Miles, assistant treasurer; directors: Walter S. Ballou, Charles S. Case, Samuel P. Colt, H. E. Converse, James B. Ford, Lester Leland, Charles B. Seger, and Elisha S. Williams.

Van der Linde Dividend

At a meeting of the directors of the Van der Linde Rubber Company, Toronto, Canada, held in that city on July 12, the company's regular semi-annual dividend of 3½ per cent. was declared payable on August 1st, 1919.

Beacon Falls Reduces Preferred

The Beacon Falls Rubber Shoe Company, Beacon Falls, Conn., has reduced the amount of its preferred stock by $40,000 to $810,000 through the cancellation of 400 shares held in the treasury.

Akron Stock Quotations

(Special Akron Correspondence)

Rubber stocks are keeping pace with other industrial issues and in some instances going far ahead of the average in the advance in price. Stocks that are at a standstill or are showing a slight falling off in price are the exception and not the rule. Goodyear, Miller and India are leading in advances.

Quotations for July 21 are as follows:

	Bid.	Asked.
Amer. R. & T., com.	50	60
do, pfd.	102½	...
Amazon Rubber	140	150
Firestone, com.	162	163
do, pfd.	99	100½
General, com.	425	...
do, pfd.	99	100½
Goodrich, com.	85	87
do, pfd.	103	104½
Goodyear, com.	...	345
do, 1st pfd.	106¾	107¼
do, 2d pfd.	106¾	107¼
India Rubber	220	225
Kelly Springfield	136	138
Mason, com.	24½	...
do, pfd.	87	...
Marathon, com.	...	55
Miller, com.	215	...
do, 1st pfd.	103½	105
do, 2d pfd.	105½	106½
Mohawk, com.	300	...
do, pfd.	100	110
Portage, com.	145	148
do, pfd.	98	98½
Republic, com.	7	7¼
do, 1st pfd.	94	97
do, 2d pfd.	94	95½
Rubber Products	143	146
Star Rub., com.	300	350
do, pfd.	...	99½
Swinehart, com.	85	89
do, pfd.	88	92

Keystone Distributes 15 Per Cent

Directors of the Keystone Tire & Rubber Company, New York City, have declared a stock dividend of 15 per cent, payable September 15 to stock of record September 2. Shareholders of record July 21 will be permitted to subscribe for one share of the new common stock which is now being offered at $40 per share for every three shares now held. Warrants will expire August 7. One interest closely connected with the company's business states that an order for $26,000,000 has been placed with the recently acquired Perfection Tire & Rubber Company. Directors of the latter company are expected to declare a monthly dividend of ½ of 1 per cent in the near future with an ultimate higher rate of dividend.

Clarke Directors Meet

The board of directors of the Clarke Rubber Company, Elyria, Ohio, held its first meeting recently and the following officers and directors were elected: H. A. Breck, president; W. H. Clarke, vice-president; C. A. Squire, secretary; E. P. Clement, treasurer; J. W. Reublin, E. T. Clauser, C. W. Smalley and C. D. Lehman, directors. Walter H. Clarke is manager of this concern, which will manufacture and sell patented rubber heels.

Colonial Tire & Rubber

The Colonial Tire & Rubber Company, Anderson, Ind., new co-operative company, is reported to be installing machinery and equipment in its factory at 32nd and East Lynn Streets, Anderson. Concrete foundations are said to be in the course of construction for the heavy machinery and the bases of several vulcanizers are reported to be already in place.

The company is now engaged in financing the enterprise. The product is to be both fabric and cord tires, and red inner tubes.

Personal Notes of the Trade

Guaranty Trust Vice-President Elected Treasurer of the Rubber Association of America—McCloskey Promoted by Goodyear—Clarence Cook, Manager of Goodrich Mechanicals

New Rubber Association Treasurer

William C. Cox, who became treasurer of The Rubber Association of America, Inc., New York City, on July 1, has been prominent in banking and business circles for a number of years. He is a vice-president of the Guaranty Trust Company of New York.

Mr. Cox first came into prominence as

W. C. Cox

secretary of the Chicago Junction Railway and Union Stock Yards Company. Later he was one of the organizers, the first secretary, and subsequently vice-president of the Standard Trust Company. When this corporation merged with the Guaranty Trust Company in 1912, he became vice-president of the latter, which position he will retain while acting as treasurer of the Rubber Association.

During the war Mr. Cox served in the United States Army, as Disbursing Officer for hospital and medical supplies at the Medical Supply Depot, New York City, as a member of the Board of Awards, and subsequent to the signing of the armistice, as a member of the Board of Contract Adjustment.

Mr. Cox is an ative of New York, where he has resided practically all of his life. He maintains residence in the Metropolis and has a country home at Sag Harbor, Long Island, New York.

Goodyear Promotes McCloskey

The appointment of H. H. McCloskey to the position of second assistant treasurer has just been announced by the Goodyear Tire & Rubber Company, Akron, Ohio.

Mr. McCloskey came to Goodyear only four years after its organization, on November 10, 1902, as a clerk in the factory payroll department. A few months later he was transferred to the treasurer's office in the bookkeeping department where his general ability and keen insight into financial matters soon won recognition. He was made cashier in 1910 which position he held until the day of his promotion.

He is also the proud possessor of a 15-year service pin which was awarded to him a year ago for faithful and continuous performance of duties during the days when Goodyear built the foundation on which its present prosperity is founded.

Cook Succeeds Yule

Clarence E. Cook, widely known throughout the rubber trade with which he has been connected for about 18 years, has been made manager of the mechanical goods department of the B. F. Goodrich Company, Akron, Ohio, succeeding W. H. Yule, whose retirement was recently announced in THE RUBBER AGE AND TIRE NEWS. Mr. Cook started in the rubber business as a salesmen. In 1910 he became Pacific Coast manager of the Goodrich. Returning to Akron two years ago, he has been since then in charge of the supervision of branch sales throughout the United States.

N. A. & C. C. Promotes Baldwin

Orlando F. Weber, President of the National Aniline & Chemical Company, Inc., New York City, announces the appointment of Robert T. Baldwin as Assistant to the President, effective June 24, 1919.

The Mid-West Rubber Manufacturers' Association

The remarkable development of the automobile industry has brought with it an era of unprecedented activity among the rubber tire manufacturers with the result that new factories are springing up in all parts of the country. Nearly every city of importance in the Middle West now has a rubber factory and some cities have two or three plants for the manufacture of tires and other rubber products. It is said Omaha will have five such factories in active operation before next spring. Several factories have recently been started in Iowa and it is said others will be built within a year.

This sudden development of the industry in the Middle and Western States brought with it the need of an active association of rubber manufacturers, and accordingly steps were taken to effect an organization of this nature during the early part of this year, with the result that the Mid-West Rubber Manufacturers' Association came into existence, as was announced at that time in THE RUBBER AGE AND TIRE NEWS.

The object of the new Association is to bring about a closer acquaintance and promote good fellowship and social intercourse among its members.

The work of organizing the Mid-West Rubber Manufacturers' Association was undertaken by John W. Maguire, General Manager of the Rubber Department of the Brunswick-Balke-Collender Company, Chicago, Ill. After an energetic campaign for membership, the new organization was duly launched and Mr. Maguire was elected its first President.

No promotion companies are permitted to join the Association. Each member must be a manufacturer and be vouched for by two manufacturing members.

The Association has started out with the greatest enthusiasm. Each monthly meeting is well attended, the discussions are interesting to all, and the general desire of the active members is to make the meetings so valuable that all who attend can gain new ideas, be advised of possible dangers to the industry and shown where economy can be practiced without impairing the efficiency of the product. By this means it is believed that the work of manufacture and selling can be largely standardized and fair profits secured for all.

The general public always looks with favor upon Association efforts of this nature for in the last analysis they are frequently compelled to pay for the result of ignorance in manufacturing a given product. People are willing to pay a fair price for a good article, but it is demoralizing to all concerned when they are compelled to pay the same price for an inferior and unsatisfactory product. The Association can stabilize in large measure and be of important service not only to its members, but to their patrons. On the anvil of war experience a new standard of service has been hammered out. Rubber manufacturers, making common cause of the needs of a nation at war, welded their energies together for the solution of tremendous problems of operation, production, distribution, and installation. Even under the stress of emergency the dominant characteristics of the various elements of the rubber industry were constantly revealed and the hard test proved the fitness of the established manufacturers to serve, through specialized training, specialized organization and specialized facilities.

As we come to the readjustment period with its illimitable demand for rubber products, the middle Western manufacturers will be vastly aided by the activities of the new Association which has been formed. It will particularly benefit the marketing of the products of these Middle Western factories and much benefit should be gained by the members from the Association meetings. It has been said that anyone can make an article, but it takes brains to sell it. By the exchange of ideas regarding most effective methods of selling, each member gains important information.

An Association of this character cannot fail to bring stability and security to the industry, and therefore, be of great advantage to every individual member.

The following are the officers and directors of the Mid-West Rubber Manufacturers' Association chosen for the ensuing year:

President, John W. Maguire; Vice-President, John T. Christie; Secretary, Preston E. Roberts; Assistant-Secretary, W. W. Todd; Treasurer, A. V. Conradt.

The Board of Directors consists of the following members: John W. Maguire, Chairman—The Brunswick-Balke-Collender Company, Chicago, Ill.; John T. Christie—Hawkeye Tire & Rubber Company, Des Moines, Ia.; Preston E. Roberts.—Perfection Tire & Rubber Company, Fort Madison, Ia.; A. V. Conradt—Kokomo Rubber Company, Kokomo, Ind.; Marshall D. Wilber—Palmer Tire & Rubber Company, St. Joseph, Mich.; C. Wright—Racine Auto Tire Company, Racine, Wis., and B. B. Felix—Featheredge Rubber Company, Chicago, Ill.

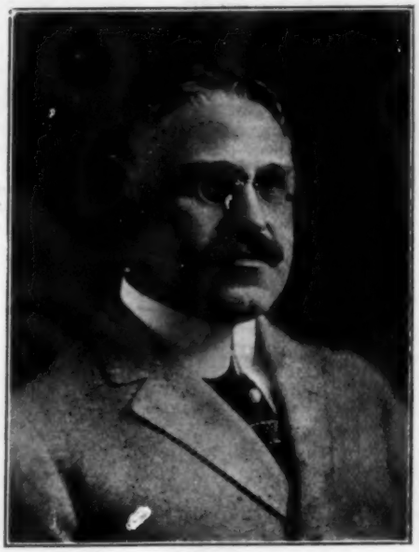
Officers and Directors

JOHN W. MAGUIRE
President

Mid-West Rubber Manufacturers Association

JOHN T. CHRISTIE
Vice-President

C. WRIGHT
Director



A. V. CONRADT
Treasurer

MARSHALL D. WILBER
Director

W. W. TODD
Assistant Secretary

B. B. FELIX
Director

Elected for Year 1919

The Association's Headquarters: Chicago

News from the Rubber Metropolis

Industrians Vote at the Goodyear—Akron May Get New Rubber Line—Effect of Removal of Export Embargo in Rubber Products —Other Items of Interest

Goodyear Industrial Elections

(Special Akron Correspondence)

Goodyear employes have elected representatives and senators under the new industrial representative plan recently inaugurated. This unique experiment in industrial government is patterned somewhat after the federal labor plan.

The successful candidates are as follows:

District No. 1—Long, Caine, Moody, Thompson; senators for the district, Brown and Haines. District No. 2—Representatives Austin, Mathews, McNellis, Yeaney; senators for the district, Douglas and Roseman. District No. 3—Gibson, Wilson, Gourley, Simons; senators for the district, Campbell and Grigsby. District No. 4—Jacobs, Parrot, Foltz, Overmeyer; senators for the district, Rose and Zellars. District No. 5—Hinkle, Moore, Kidder, Adams; senators for the district, S. Settle and J. Schiller. District No. 6—Patterson, Smith, Gourley, Simmons; senators for the district, Howe and Taylor. District No. 7—Shivly, McDermott, Nollan, Nelson; senators for the district, Snyder and Shepard. District No. 8—Miller, Fallon, Allman, Frank; senators for the district, Coleman and Gibson. District No. 9—Reed, Caters, Cadin, Reeves; senators for the district, White and Malone. District No. 10—Gilmore, LeMay, Eddleman, Lyons; senators for the district, Woodward and Hard.

New Industry for Akron

(Special Akron Correspondence)

Akron may soon become the home of a new rubber industry, according to reports in local business circles. A rubber compound surface material for roadbuilding has been patented in Switzerland and an American company will soon be organized for its manufacture and sale, it being suggested by the promoters that Akron would be an ideal location for the plant.

A French chemist has prepared the new material which experts say surpasses any present tar or macadam surface. It makes a long wearing and easy riding road, it is said.

Swanson with Firestone

(Special Akron Correspondence)

A. E. Swanson, who until the early part of the year was director of the bureau of research and statistics of the war trade board, has been engaged for the past few months in organization work at the Firestone.

Previous to 1918, Mr. Swanson was dean of the School of Commerce of the Northwestern university at Chicago, and for some time he was in charge of work at one of the largest industrial concerns in the United States, similar to that in which he is now engaged at the Firestone.

Goodyear Truck in Test

(Special Akron Correspondence)

A large Goodyear Akron-Boston express truck was entered in the one hundred truck expeditionary force which made a 375-mile trip in the vicinity of St. Louis to prove the practical worth of the truck as a freight and express transport.

Seiberling and Politics

(Special Akron Correspondence)

Politicians in Northern Ohio are discussing the possibility of F. A. Seiberling, president of the Goodyear Tire & Rubber Company, entering the field as Republican candidate for United States senator to succeed Senator Atlee Pomerene, Democrat, whose term expires in 1923. Mr. Seiberling has been interested in state politics for some years and has been a contributor to state and national campaign funds. It is reported that he is not averse to taking a seat in the United States senate provided a favorable opportunity develops.

Employment in Akron

(Special Akron Correspondence)

More than 60,000 men and women are employed at the large rubber factories here, statistics published recently show. The Goodyear Tire & Rubber Company reports 22,500 employes, the Firestone Tire & Rubber Company 15,000 and the B. F. Goodrich Company 23,300.

Goodyear reports that more than 6,000 ex-service men are now employed at that plant. The proportion holds good in the other factories, it is said.

Even with this immense number of new employes, Akron is in need of at least 2,500 more workers immediately, it is said. Housing conditions are such that it is improbable that this number will be added to the factory forces for some time to come.

Goodyear Relief Association

In the eleven years of its existence, the Relief Association of the Goodyear Tire & Rubber Company, Akron, Ohio, has paid $78,899.10 compensation for sickness and accident to 4,164 of its members. This means an average of $18.95 for each person drawing benefits. Death benefits for the same period amounted to $157,878.00, covering 158 recorded deaths.

The Association held its organization meeting in the factory office, January 13, 1909. There were 186 signers to the charters, fifty-eight of whom are still with Goodyear.

Big Tire Business in Porto Rico

(Special Akron Correspondence)

Jose J. Figueroa, the largest dealer in automobiles, tires and accessories in San Juan, Porto Rico, recently visited the Firestone in Akron, Ohio, plant here to arrange for increased shipments of Akron products to his island home. He predicts a great future for the motor business on the little island as there are only 10,000 automobiles there now. His company already operates a line of busses from San Juan to Ponce, a distance of 90 miles, and he has equipped the passenger trucks with big pneumatic tires.

Goodyear's Mexico Distributor

(Special Akron Correspondence)

R. Bueso Garcia has left the Goodyear plant after nine years' service to take charge of the distribution of Goodyear products throughout Mexico. His headquarters will be in San Antonio, Texas. He is a Mexican by birth.

Rubber Products and Germany

(Special Akron Correspondence)

The lifting of the embargo on shipments of American goods to Germany has not caused any ripples of excitement or anticipation on the part of export departments of local rubber companies. The consensus of opinion seems to be that rubber factories will do well to keep abreast the domestic demand for the present.

Customers of the Miller Rubber Company within the limits of the old German empire have made inquiries and have placed some orders since the armistice was signed. The question of credits, however, has kept the company from making any shipments. Surgical goods are the chief articles for which orders have been received.

The B. F. Goodrich Rubber Company has arranged to handle all its European business through its Paris factory.

At the Firestone Tire & Rubber and the Goodyear Tire & Rubber companies, export managers expressed the belief that the fields now being covered would take all the manufactured products available at this time.

Another factor which enters into the possibility of resumption of trade with Germany at this time is the uncertainty of exchange rates.

Reports from New York that speculating in crude rubber has caused a rise in prices on the market there have not worried local manufacturers. The large companies are protected by contracts or have supplies available from their own plantations. Little crude rubber, it is said, is being bought on the open market at this time.

Ohio Rubber Notes

The Mohawk Rubber Company, Akron, Ohio, plans to erect $50,000 worth of additions to its plant.

The Owen Tire & Rubber Co., Bedford, Ohio, has applied for authorization to increase its capital stock from $400,000 to $850,000.

Millersburg, a town about fifty miles south of Akron, is seeking to cause a rubber company to locate there. The Tubeless Rubber Company already has a factory in that place.

The Fidelity Tire & Rubber Co., which has leased the Kendall plant in Massillon, Ohio, is now in operation and is producing Ford size tires. E. C. McConnell is factory superintendent.

The L. H. Butcher Company, of 100 William street, New York City, and San Francisco, manufacturers and dealers in chemicals for the rubber industry, have opened a branch office in the Peoples' Savings & Trust Building, Akron, Ohio, with George H. Jacobs in charge.

The Barberton Chamber of Industry, Barberton, Ohio, which was organized recently, has elected the following officers: L. P. Mauger, Akron-Biltwell Tire & Rubber Co., president; O. C. Barber, vice-president. Its board of directors consists of G. K. Fargo, Lambert Tire & Rubber Co.; J. Hadfield, Lincoln Rubber Company; and J. F. Risch, of the Biltwell.

Goodyear Export Activities

(Special Akron Correspondence)

The Goodyear is getting ready to send salesmen into a new field,—the western part of South America. Several road men have been called into the general offices here and have been offered positions as Goodyear representatives in Chile, Peru and Ecuador.

Tire Trade Personals

Mason to Have Plantation Representative—Keystone Gets Reynolds—Fisk Loses Whitlock—Stronghold Appoints Branch Managers—Hubbard Promoted by United States Tire

Matthews Mason's Orient Representative

J. P. Matthews, purchasing agent of the Mason Tire & Rubber Company, Kent, Ohio, will become permanent resident representative of that concern in the Orient. He will sail with O. M. Mason, president of the company, from Vancouver, B. C., on September 5, on board the S. S. Empress of Asia. Their destination will be Singapore Straits Settlements.

J. P. Matthews

Mason Brothers have decided that, in conjunction with the fabric mill, which will produce the fabric for Mason tires, they should also control their crude rubber plantations in the Far East and O. M. Mason is going to spend a number of weeks in the Far East in the examination of plantations, with a view to purchasing partially developed plantations. Mr. Matthews will remain permanently in the Far East as the representative of the Plantation Company which Mason Brothers will no doubt organize during the latter part of the present year.

Mason Brothers expect to acquire plantations comprising a number of thousand of acres of land partially developed and yeilding sufficient rubber to take care of the Mason Tire & Rubber Company's requirements next year. It is their intention to immediately proceed with the planting of additional undeveloped acreage so that the production of rubber from the plantations will increase with the expansion of the Mason Tire & Rubber Company's business.

It is no doubt probable that by May of next year crude rubber from the Mason Far East plantations will be arriving in Kent, and it is expected that within a year from date The Mason Tire & Rubber Company, through its connections with The Mason Cotton Fabrics Company and the Mason Plantation Company, will have control of 100 per cent of its raw materials, excluding pigments.

D. M. Mason, in talking about this matter, stated that "at the present time when we buy crude rubber from importers there are three or four profits on it. The importer we buy from quite frequently purchases it from a London importer who has purchased it from agencies in Singapore, Malacca, and other eastern trade points, who, in turn, have purchased it from traders who bought it direct from plantation owners. It is our intention to eventually produce, through our associated companies, the entire raw materials that go into the production of Mason tires. This will mean not only splendid connections for the Mason Tire & Rubber Company, but for the Mason Cotton Fabrics Company and the Plantation Company as well. The Plantation Company will no doubt erect a large concrete warehouse in Kent, presumably on the land which is now controlled by our people."

It is understood that upon O. M. Mason's return from the Far East, D. M. Mason wil make a trip over to conclude the purchase and handle the creation of a plantation organization.

Stronghold Appointments

The Rubber Products Company, Barberton, Ohio, manufacturers of "Stronghold" tires and tubes, and of rubber sundries and mechanical rubber goods, has appointed managers for different sections of the United States.

W. S. Dellett, former Texas representative, has been appointed northwestern manager, with headquarters at Minneapolis, Minn., and takes up his duties immediately.

Stewart Slosson, recently representative of the Federal Rubber Company, Cudahy, Wis., for Connecticut, and formerly Pacific Coast representative for the motorcycle tire department of the Firestone Tire & Rubber Company, Akron, Ohio, has been appointed Pacific Coast representative for "Stronghold."

R. M. Garvey, former sales supervisor in the middle west for the Ajax Rubber Company, Trenton, N. J., has been appointed middle west manager, with headquarters in Chicago, Ill.

Goodyear Foreign Men Home

Several leading members of the foreign branches of the export organization of the Goodyear Tire & Rubber Company, Akron, Ohio, are now in this country getting in touch with latest developments at the factory. Among these are: H. J. Hunter, managing director of the Goodyear Tyre & Rubber Company, of Australasia, Limited, Sydney, Australia; Ernesto Avery, president of the Cia. Espanola de Neumaticos y Caucho Goodyear, Madrid, Spain; J. R. Reilly, manager, Goodyear Rio de Janeiro, Brazil, branch; Major P. D. Saylor, managing director, the Goodyear Tyre & Rubber Company of Great Britain, Limited, London, England; Ross White, manager of the Goodyear Tyre & Rubber Company of South America, whose headquarters are in Buenos Ayres, Argentine Republic.

Firestone Entertains

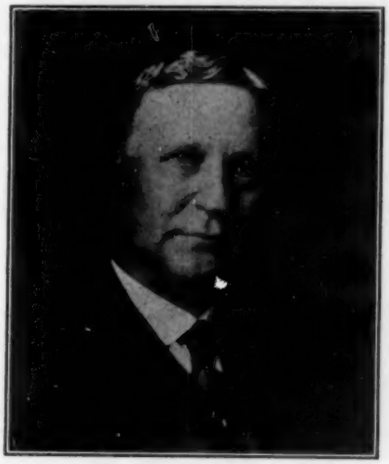
(Special Akron Correspondence)

H. S. Firestone, president of the Firestone Company, was host on Sunday, July 13, at a country chicken dinner served to 230 officers and men of the first continental army motor convoy at his old homestead in Columbiana county.

F. I. Reynolds Joins Keystone

Announcement has recently been made of the appointment of F. I. Reynelds to the position of director of sales of the Keystone Tire & Rubber Company, New York City.

Mr. Reynelds is well known in the tire trade, having started with the Diamond Rubber Company, Akron, Ohio, about ten years ago as the tire sales manager. When the B. F. Goodrich Company absorbed the Diamond, Mr. Reynelds went with the Goodrich and was manager of sales of pneumatic tires for three years. In 1915 he became connected with the United States Tire Company, New York City, in the same capacity and did much valuable work in organizing a large distribution of Hartford, G. & J., and the Revere Tires through wholesalers in hardware lines. Mr. Reynelds is very well known and goes to his new position with the best wishes of his numerous friends in the industry.



F. I. Reynolds

Whitlock Leaves Fisk

William Whitlock, for over fifteen years with the Fisk Rubber Company, Chicopee Falls, Mass., has severed his connection with that concern, and will take a vacation of several months before again entering business.

Before going to the Fisk, Mr. Whitlock was with the G. & J. Tire Company, Indianapolis, Ind., where he rose from foreman to superintendent, a position he held until he resigned to become assistant superintendent of the Fisk Rubber Company's plant. He is a very frank and outspoken man and is very popular at the Fisk factory and among all those who know him. He leaves with the best wishes of the whole Fisk organization.

U. S. Tire Promotes Hubbard

H. H. Hubbard has been made assistant manager of the distributors' department to handle the factory-named brands of tires manufactured by the United States Tire Company, New York City, and will make his headquarters in Chicago. In his new post he will have charge of the sales of G. & J., Hartford and Revere tires to distributors in Illinois, Wisconsin, and the territory lying between the Mississippi and the Rocky Mountains. Beginning in 1902 as a salesman in Indianapolis, he has been branch and district manager for the company in Indianapolis, St. Louis, Minneapolis and most recently in Kansas City.

Miscellaneous News of Rubber Trade

U. S. Rubber to Operate in Canada—Schrader Wins Suit—National Aniline's New Akron Man—Davidson Out of Pen Business —Other News Items

U. S. Rubber Company of Canada

For the purpose of furthering the activities of the United States Rubber Company, New York City, throughout Canada and extending to the Dominion the same broad campaigns that it has been carrying on in this country, the United States Rubber Company of Canada, Limited, has been incorporated with a capitalization of $20,000,000. This move it is believed will be instrumental not only in increasing business generally but also in stimulating the export trade of the parent organization.

On the board of directors of the new organization are Sir Mortimer Davis, also a director of the U. S. Rubber Company; Sir Charles Gordon, Lieut.-Col. Herbert Molson, J. B. Waddell, E. W. Nesbitt, M. P., Victor E. Mitchell, K. C., W. A. Eden, R E. Jameson, Col. S P. Colt, chairman of the U. S. Rubber Company; C. B. Seger, president, U. S. Rubber Company; H. E. Sawyer, vice-president in charge of Footwear Division, U. S. Rubber Company; E. S. Williams, vice-president in charge of Mechanical Goods Division, U. S. Rubber Company, and J. N. Gunn, president of U. S. Tire Company, in charge of Tire Division.

These directors have organized by electing the following officers: C. B. Seger, president; W. A. Eden, vice-president; Victor E. Mitchell, K. C., general counsel, and W. Binmore, secretary and treasurer. Both the directors and officers of the new corporation are practically identical with those of the Canadian Consolidated Rubber Company, Limited, which is also owned by the United States Rubber Company, and which to increase its output will spend $1,000,000 in additions on its tire plant at Kitchener, Ont.

Schrader Wins Patent Suit

By an order of the United States District Court for the Northern District of Illinois, Eastern Division, the Protex Mfg. Company, the Protex Tire Gauge Mfg. Company, and the Protex Tire Gauge Company have been placed under an injunction restraining them from selling the so-called Protex Gauge and Rex Gauge. Action was brought by A. Schrader's Son, Inc., Brooklyn, N. Y., in which it was claimed that these gauges were an infringement of the principle and mechanism of the Twitchell gauge which is now being manufactured by that organization.

Tyer's New York Distribution

Frank L. Williams, who has been connected with the Tyer Rubber Company, Andover, Mass., for the past thirty-four years and manager of its New York office for fifteen years, has been designated New York representative of the company under its authorization to do business in the State of New York, at 302 Broadway, New York City.

New Akron Man for N. A. and C. Co.

E. J. Small, Jr., has been placed in charge of the Akron territory of the National Aniline & Chemical Company, New York City, with offices in the Peoples Savings & Trust Building, Akron, Ohio. H. H. Repogle will devote most of his attention to eastern territory.

Aldens' Successors

Aldens' Successors, Inc., 260 Broadway, New York City, importer and dealer in crude rubber and general merchandise, was incorporated on June 23 to succeed the American branch of Aldens' Successors, Limited, London, England. The officers of the new corporation are as follows: Thomas A. Maguire, president and treasurer; Alvah H. Brown, vice-president and assistant treasurer; M. M. Howser, secretary. The directors are: Thomas A. Maguire, Alvah H. Brown, John Cone, Edwin T. Rice, and John French.

To Close Guayule Factory

At a special meeting of directors of the International Rubber Company, New York City, it was decided to close down the company's factory at Lorrean, Mexico, for an indefinite period owing to the prevailing low level of values for all crude rubber and present conditions in Mexico, which makes supplies guayule both precarious and costly.

The International Rubber Company is said to have on hand sufficient stocks of crude guayule to maintain sales for several months.

New Rubber Chemical Agents

The A. G. Watt Company, Para Building, Cleveland, Ohio, have been appointed representatives and sales agents in the mid-western territory for Hummel & Robinson, manufacturers and importers of chemicals and dry colors for the rubber, paint and varnish trades.

Mr. A. G. Watt, who is at the head of the new concern, was formerly connected with E. M. E. F. Waldo, New York City, and prior to that with the Sherwin-Williams Company for ten years, acting most of this time as assistant general purchasing agent.

Stickney, Tirrell, in New Quarters

Stickney, Tirrell & Company, importers of chalk and manufacturers of whiting, have removed to the Old South Building, Washington and Milk Streets, Boston, Mass. This concern's factory is in South Boston.

Davidson Sells Sterling Pen

The Davidson Rubber Company, Charlestown, Mass., has sold the machinery and stock of the Sterling Fountain Pen Company, Charlestown, to A. F. Harrington, 15 Brattle Street, Boston, Mass.

New Rubber Mold Company

A new company for the manufacture of rubber molds has been incorporated in Cleveland, Ohio, with a capital stock of $1,000,000. The name of the new concern is the Cleveland Rubber Mold & Machine Company. A plant on Warren Road is contemplated.

Rubber Imports Doubled

Imports of crude rubber into the United States during March reached a figure not attained in any single month in the past four years. The 28,223 tons of this commodity brought in last month were more than double the quantity imported during

U. S. Rubber Plantation Notes

W. J. Gallagher, managing director of United States Rubber Plantations, Inc., a subsidiary of the United States Rubber Company, New York City, and Mrs. Gallagher will return to New York late this month after a visit to Ireland. After a short stay here, they will proceed to the company's plantations in Sumatra via the Pacific.

George H. Seybold, recently elected Executive Assistant to Mr. Gallagher, is on his way to the plantations, having sailed from New York to Liverpool early in March.

Mr. and Mrs. David M. Figart are on their way to the plantations, having sailed from San Francisco late last month. Mr. Figart is Manager of the Singapore office of United States Rubber Plantations, Inc.

Philip Belford, Office Manager of the General Rubber Company's offices at Singapore, has arrived in New York for a few months' stay.

New Quaker City Factory

The Quaker City Rubber Company, Philadelphia, Pa., manufacturer of tires and mechanical rubber goods, will erect a large new factory at Wissinoming, Pa.

The new building will be of brick and concrete construction and will be fireproof throughout. It will be equipped with the most up-to-date machinery. It is estimated that the improvement will cost $100,000.

Seamless Awards Contract

The Seamless Rubber Company, New Haven, Conn., has awarded the contract for a five-story, 60 x 240-ft., factory, two one-story connecting buildings and a power house, to be erected in Hallock Avenue, New Haven, at an estimated cost of $500,000.

Luzerne Enlarging Plant

The Luzerne Rubber Company, Muirhead Avenue, Trenton, N. J., manufacturer of battery jars and other hard rubber goods, has awarded the contract for the erection of a 2-story, 50 x 75-foot, addition to its plant, to cost about $13,000.

New Voorhees Representative

The Voorhees Rubber Manufacturing Company, Jersey City, N. J., has appointed C. L. Falkinburg as its representative for the States of Michigan, Ohio, Illinois, Indiana, Kentucky, Tennessee and Alabama. Mr. Falkinburg's headquarters will be in Jackson, Mich.

Goodrich Export Warehouse

The B. F. Goodrich Rubber Company, New York City, has leased a six-story concrete and steel building built for the army at Hoboken, N. J., and will utilize it as an export and Atlantic seaboard distributing station.

Granger Rubber Heel Co.

The Granger Rubber Heel Company, Cleveland, Ohio, incorporated at $200,000, will manufacture and sell a new rubber heel invented and patented by D. D. Granger, postmaster, New London, Ohio.

Hamilton Adding to Factory

The Hamilton Rubber Company, Clinton and Mead streets, Trenton, N. J., has awarded the contract for a 3-story, 75 x 75-foot, addition to its plant, which will cost approximately $20,000.

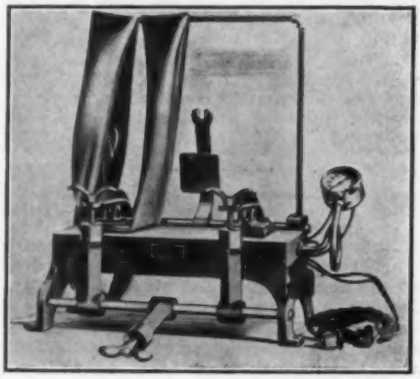
New Machinery and Equipment

A Steam-Electric Vulcanizer—Shaler's New Automatic Equipment—Wellman-Seaver-Morgan Air Bag Ring Forcing Press to Replace Hand Bolts

Heintz Electric-Steam Vulcanizer

The unprecedented demand for tire repair equipment experienced within the past twelve months and the probability that in the future tire repairing will be carried out to a greater extent than was the case before this nation learned to economize, have attracted much inventive attention to tire repair equipment.

Some time ago the firm of Jas. C. Heintz & Company, 2071 East 9th Street,



HEINTZ VULCANIZER

Cleveland, Ohio, clearly perceiving the need for a practical inner tube vulcanizer for use in garages and repair shops, started experimenting with apparatus using electricity as a source of heat, with the result that they have now developed a device which they call an automatic electric-steam vulcanizer.

The experience of tire and rubber manufacturers, as well as tire repair men, has demonstrated the advantages of steam as a medium for conveying the heat necessary for vulcanizing rubber. Steam is used for curing wherever practicable. Even some small tire patch vulcanizers have little steam generators. In larger tire repair equipment, suitable for garage and repair shop work steam is used as a matter of course. In the Heintz vulcanizer steam is used, but it is generated by electricity and is maintained at any desired pressure by a magnetic device that automatically switches the electric current off or on with such precision that the steam pressure will not vary more than two pounds in a working day.

The entire table surface of the machine is a specially designed heating unit, with a regulation U. S. standard steam gauge attached, the pressure controlling mechanism being incorporated in the gauge. To provide against emergencies two safety plugs are provided and will blow-out and empty the steam chest if for any reason pressure should approach the danger point.

Heintz automatic electric-steam vulcanizers are made in two sizes, 5½ x 16 inches and 6 x 22 inches. The capacity of the smaller machine is three tubes at a time, or eighteen tubes per hour, while the capacity of the larger size is four tubes at a time, or 24 tubes per hour.

These vulcanizers meet the requirements of the fire-insurance companies as there is no flame.

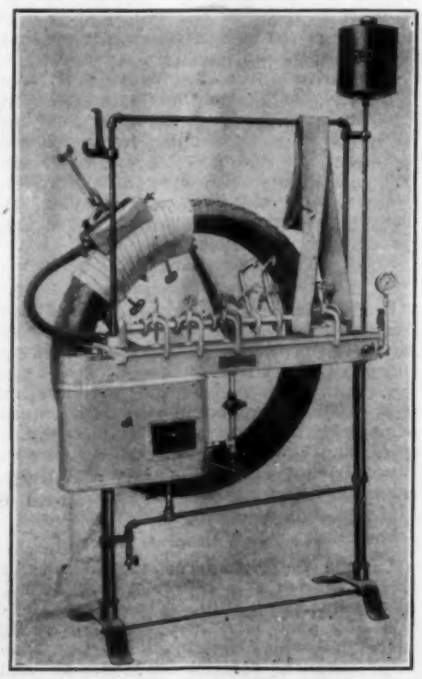
Current may be taken from any lighting socket and the cost of operation is from one to two cents an hour, depending on the size of the machine and the rate paid for current. Jas. C. Heintz & Company guarantee their vulcanizers for one year.

Shaler Automatic Vulcanizer

One of the types of tire repair equipment that is especially adaptable for the small garage which wants a simple, inexpensive vulcanizing plant, as well as for the repair shop that demands reliability and large capacity, is the Shaler Type NPR No. 41, here illustrated. There is ample capacity for handling about 200 tubes and a dozen casings daily. Any type of repair that is practicable with any vulcanizer can be handled, from tube punctures to the largest casing blowouts. By the use of the Wrapped Tread Method, adapted from the method used by some tire manufacturers in making tires, the repair of casings is reduced to the simplest terms, and all sizes and kinds of casings are mended with one set of molds.

The manufacturers claim that great economy of repair material is secured by the elimination of cutting away and replacing a section of the tube as is often done by repairmen, and that at the same time a stronger repair is made than when the tire is weakened by cutting into sound fabric. A fifty per cent saving in time of curing is said to be accomplished by heating the tire from inside and outside at the same time.

This vulcanizer is heated by steam generated by a gas or gasoline burner. One of the outstanding features of this equipment is the automatic control of temperature by means of a thermostat. It is said to be possible to overcure or undercure a tire and that no attention needs to be given to the vulcanizer while it operates as the temperature cannot vary from the correct degree. The vulcanizer is portable, weighing but 200 lbs., and can be moved about the shop even while in operation.



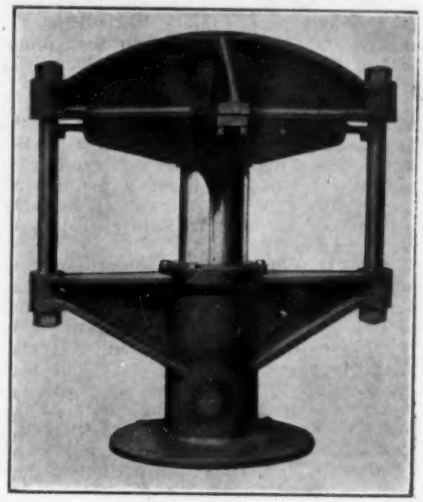
SHALER AUTOMATIC VULCANIZER

The W-S-M Rimming Press

The W-S-M rimming press has been developed to meet the demand for a small press, suitable for forcing together the air bag rings used in the manufacture of cord tires. The old method was to draw the rings together by hand by means of the bolts holding them together. By using the W-S-M rimming press the rings are brought together quickly ready to receive the bolts; the whole operation taking but a few seconds.

The operation of the press is extremely simple, no mechanical knowledge being necessary.

The cylinder, ram and platens are of heavy semi-steel and the cylinder and base are cast in one piece. The cylinder is outside packed with a U-leather ring packing with a flax core. This packing is held in place by a gland which can be removed easily. The base of the cylinder is tapped with a 2-inch pipe tap for the pressure line.



W-S-M RIMMING PRESS

The ram cap or lower platen and the upper platen are spider shaped to enable the operator to get in and easily tighten up the bolts on the rings after they have been forced together. The upper platen is supported on heavy steel rods and acts as the upper frame of the press.

The clear distance between platens when the lower one is down is fourteen inches; the clear distance between the rods is 45¼ inches.

This new press, which no doubt has a big future before it, because it fills our need of growing importance, is made by the Wellman-Seaver-Morgan Company, engineers and manufacturers; Cleveland and Akron, Ohio.

New Tire Factories

The Osborn Engineering Company, Cleveland, Ohio, is preparing plans for a large number of new tire factories, among which can be mentioned the following:

Union Tire & Rubber Company, Cleveland, Ohio; Erie Tire & Rubber Company, Sandusky, Ohio; the Dryden Rubber Company, Chicago, Ill.

The same concern is engaged in preparing plans for additions to the plants of the Faultless Rubber Company, Ashland, Ohio; the Mason Tire & Rubber Company, Kent, Ohio; and the General Tire & Rubber Company, Akron, Ohio.

News Items of Interest to Tire Men

Tire Price Predictions—Pennsylvania Reduces Prices and Increase Mileage Guarantee—K. S. Canadian to Make Tires—Portage Sales —Michelin Employes Insured

Tire Prices

(Special Akron Correspondence)

Managing Director Cook of the Kelly-Springfield Tire Company, Akron, Ohio, estimates the country's tire need this year at 19,000,000. Every tire company in the United States, it is said, is assured of all the business it can handle for the next few years. The effect of this unprecedented boom is noticeable first in Akron where every manufacturing rubber company is advertising for men to increase production and the price of common stocks is ever soaring.

In connection with this estimate of the country's needs, it is interesting to note that prices may tumble instead of increase. One cut already has been made and some of the companies are advertising greater mileage adjustments.

The latest advices are from eastern sources. These say that tires are due to drop back to pre-war prices. This prediction is based upon the fact that crude rubber has dropped 40 cents a pound and the further fact that the rubber industry was one of the first to adjust itself to a peace basis.

Some time ago Akron newspapers were offered an interview with a leading rubber manufacturer which predicted the cut in tire prices. The publicity manager of this particular company also suggested that the story carry the statement that pre-war prices would prevail while the wages would remain at the wartime level. For some reason or other, the interview was withdrawn and was never published. It appears now that this prediction was about to come true.

Pennsylvania Makes New Decrease

The Pennsylvania Rubber Company, Jeannette, Pa., announced on July 21 a new cut in the prices of its tire casings and inner tubes to take effect immediately. The decrease in prices amounts to about 5 per cent on small sizes and 10 per cent on the larger ones. The reason given for this unexpected move is improved manufacturing facilities, increased output, and an economical zone selling system, which make the reduction possible.

Coincident with the reduction in prices, the Pennsylvania announces a new adjustment basis, which is 6,000 miles for fabric tires and 9,000 miles for tires of cord construction.

Victor Rubber Opens Branch in Chicago

Rapidly expanding business necessitating quicker distribution and service to dealers has caused the Victor Rubber Company, of Springfield, Ohio, to open a branch at 1720 South Michigan avenue, Chicago, Ill. Two other branches were opened this year; in New York, 1991 Broadway, and the Kansas City, Mo., office at 1707 Grand avenue.

The Savold Tire Corporation

The Savold Tire Corporation, New York City, announces that it has sold the rights for the use of the Savold process for rebuilding tires in the State of Ohio for $500,000. It further announces that in addition to this it will receive a royalty of $1.00 per tire for all tires rebuilt by agents and sub-agents in Ohio.

Goodyear's Traveling Schools

An innovation of real value and of more than usual interest in sales organization work is the establishment by the Goodyear Tire & Rubber Company, Akron, Ohio, of week-end "Traveling Sales Schools."

As pressure of business made it inadvisable to take the men off their territories in order to send them to the company's school at Akron for instruction, there seemed no other alternative than to send a team of capable instructors to the men in the various branches of the company.

Instruction is given Thursday, Friday and Saturday of each week, the fore-part of the week being used by the instructors in preparation and a survey of the field. Class room work covers policy, product and salesmanship with reference to tires, accessories and mechanical goods. The schools keep the salesmen from losing touch with the factory and renew their enthusiasm.

In the East and Central West the "Traveling Sales Schools" have already visited Pittsburg, St. Louis and Kansas City. In the South they recently covered the company's branches at Louisville, Memphis and New Orleans. At present they are in Indianapolis.

Canadian Company Adding to Lines

The K & S. Canadian Tire & Rubber Company, Limited, 527 Younge Street, Toronto, Canada, with factories at Weston, Ont., Canada, announces its intention to double the capacity of its present plant and to add dipped goods to the lines it is now manufacturing, which consist of a complete line of molded rubber sundries.

This concern will erect and equip a building to take care of its dipped products and will also erect an 80 x 185-foot, three stories, tire factory of fireproof construction. Both of these new buildings will be erected on the company's property at Weston, Ontario, and it is now in the market for the necessary machinery and equipment.

The tire plant contemplated will have a capacity of at least 1,000 casings and 1,000 inner tubes a day.

The K. & S. Canadian Tire & Rubber Company, Limited, has branches in Montreal, Hamilton, Winnipeg and Toronto, Canada, and its lines are handled by dealers throughout the dominion.

Trader Covering West

(Special Akron Correspondence)

E. H. Trader, sales manager of the American Rubber & Tire Company, has just left the factory on an extended trip through the west. He will stop off at Denver, Col., and then spend the greater part of the summer with the distributors of American-Akron products in Los Angeles, San Francisco and Seattle, and will return by way of Canada. Mrs. Trader accompanies him on the trip.

Wilkinson Vulcanizer Prices

In the description of the Wilkinson tire repair vulcanizers that was published in the March 10, 1919, issue of THE RUBBER AGE AND TIRE NEWS, the following prices of this equipment should have been quoted: $159.72 on Model H. and $188.60 on Model K.

Opens New Branches

That the Keystone Tire & Rubber Company, New York City, is becoming one of the most important factors in the distribution of tires is more apparent every day. The ambition of this firm is unlimited and their enormous business is growing daily.

One hundred and twenty-four stores are now being operated successfully in leading cities throughout the country and it is the plan of the Keystone Tire & Rubber Company to have two hundred stores running before the end of the year.

The success of the Keystone stores is due in part to the original cooperative partnership plan of the Keystone Company which has helped tire dealers to grow big and prosperous.

In all these stores, Keystone and Batavia tires (Firsts) are featured and the demand for them is growing to such an extent that Keystone and Batavia factories are working at full speed night and day. In addition, the Keystone Stores are also distributing centers for "seconds" over-productions and surplus stocks of twenty-one well-known tire factories.

Portage Sales

(Special Akron Correspondence)

Sales of the Portage Rubber Company, Barberton, Ohio, for the first six months of the fiscal year ended May 31 were $2,593,000, an increase of $586,900 over the corresponding period last year, or 29 per cent. The net profit amounted to $397,000, an increase of $94,300, or 31.1 per cent, according to a statement issued by the company.

As this report included December, 1918, at which time business was a great deal slower than it is this month, the statement does not show the growth that a statement for the first six months of this year would indicate.

Michelin Insures Employes

All employes of the Michelin Tire Company, Milltown, N. Y., have received an individual life insurance policy for varying sums, depending on their years of service with the company, according to J. Hauvette-Michelin, vice-president and director of the concern.

By this plan every employe of the concern in every one of its various factories received free of cost a life insurance policy graded, according to the length of service from $200 for six months to $1,200 for ten years and over.

Each new employe will be insured upon completion of his first six months with the company. Each employe received an individual policy, which became effective on June 16, 1919.

New General Tire Branch

The General Tire & Rubber Company, Akron, Ohio, has opened a direct factory branch at 2109 Commerce Street, Dallas, Tex., from which the entire trade in the State of Texas will be served. Thomas L. Moore, southwestern district manager, is in charge of this branch.

Ryan & Hughes Braender Distributors

The Ryan & Hughes Company, Inc., 1698 Broadway, New York City, will distribute Braender automobile tires and inner tubes in New York City, Staten Island and Long Island, New York, according to an announcement just made by the Braender Rubber Tire Company, Rutherford, N. Y.

MARKETS

Manufactured Rubber Goods

NEW YORK, July 22, 1919.

Business conditions in the manufactured rubber goods trade continue to mend. At home industrial operations in general are gaining momentum, the copper mines are striking up a faster pace, the agricultural regions are prosperous; outdoor construction work is increasing, and foreign trade, despite record low exchange rates for the English pound, the franc, lire and mark, is invested with encouraging aspects. As drawbacks diminish the brighter side of things loom larger. Although the decreased purchasing power of the moneys of the leading European countries acts as a check-rein on rapid developments in exports, the need of goods is causing expansion. A veritable procession of foreign loans to provide the sinews of reconstruction are likely to be put out in our markets. The newly carved out countries of Europe are expected to be liberal buyers of American rubber goods.

Mechanical Rubber Goods

Domestic trade is not brisk, but the tendency is toward improvement. Export business is growing. At home belting for farm tractors is in better demand, and other lines are reviving. Plumbers supplies feel the impetus of the extensive building programme now being carried out in the United States. Besides there is considerable demand for repair work owing to the brisk turn over of houses that are in being. But some of the small manufacturers have been complaining that the keen quest for orders for belting has resulted in some sellers allowing increased discounts, which are deemed to be the equivalent of reduced prices. Though the railroads have not figured in the demand for new equipment to any great degree, inquiries from these interests are more numerous, and some of the larger manufacturers expect actual orders to accrue. It is felt that the railroads need stock, and that the hand to mouth providing of supplies that has long been carried on through the intermediary of intertrading under the supervision of the Federal Railroad Administration has left the roads rather bare of supplies.

Europe has bought quantities of belting hose, and railroad supplies. As shipping facilities increase, and freight rates decrease further improvement is likely, assuming, of course, that credit, the prime essential, is provided in due season.

Druggists Sundries

Seasonal quiet hampers domestic trade, the summer months being always dull. Export trade is active. Shipments are being made to England, France, India, and Latin America.

It is said that stocks in the hands of domestic retail dealers are light, they having been careful in making purchases for some time back. Many of them have expected reductions in prices.

Automobile Tires

Activity dominates the manufacturing trade. All of the leading interests are being favored with orders that tax their producing facilities. Demand for solid tires for commercial trucks is brisk, and the large manufacturers of automobiles are reported to be liberal customers for pneumatic tires. A number of the wholesale dealers complain that as so many people have entered the business, the sales of the individual concerns have been pared down.

Retreaded tires are in excellent demand, and a number of the shops are increasing their facilities for turning out these made over tires.

The Pennsylvania Rubber Company has reduced the prices for its tires to the extent of from 5 to 10 per cent depending upon the sizes. This reduction, plus that made in May last, makes a total decrease of 20 to 25 per cent within the last two months. It is said that the socalled "big four" will not reduce their prices at this time because of the high cost of labor as well as the increased prices for tire fabrics made of cotton. Still the denials do not impress the wholesale dealers, many of whom anticipate that the large companies will eventually lower their quotations. Export trade, both to South America and to Europe is expanding. It is said that large quantities of tires which had been held in the free port of Copenhagen were rushed into Germany upon the lifting of the embargo. From these transactions the Danes are reported to have made profits estimated at 100 per cent over the cost price of the tires.

Miscellaneous Products

Recent rainy weather, which has been general over most of the country, stimulated demand for rubber footwear, as well as coats. Inquiries for footwear have been received from Europe and Siberia, and it is thought that business eventually will develop. Bathing caps are in active demand, this being the usual condition witnessed at this season of the year.

Manufacturers of rollers for wash ringers have been able to get quantities of their product into Europe. Considerable of these rollers had long been held up in the United States.

Cotton, Yarns and Fabrics

NEW YORK, July 22, 1919.

The local cotton market has been distinctly a bullish one during the past two weeks, and the future market advanced sharply following the signing of the peace treaty, future delivery cotton advancing as much as $12 per bale. Following the ratifying of the peace treaty, there was a heavy volume of speculative buying of cotton for the more distant deliveries, and the subsequent announcement in Washington that a resumption of trading with Germany would be at once begun served to accelerate the speculative demand for the staple. As soon as Germany is able to furnish adequate financial credits, the movement of cotton to that country is expected to start on a heavy scale.

SEA ISLAND COTTON

Sea Island cotton planters are materially cutting their acreage this season, and the yield this year will not be more than 10 per cent of a normal yield, according to reliable reports from the Sea Island district. Many manufacturers are proceeding with experiments with other varieties of cotton to take the place of the Sea Island as it is conceded that cotton-growing is practically a "dead" industry in the Sea Island district, at least for the present, the growers being unable to combat the inroads of the boll weevil. Holdings of old crop Sea Island cotton are not large, and the price is nominal.

EGYPTIAN COTTON

A strong American demand for Egyptian cotton is reported in the American market, and the Cotton Control Commission in Egypt has just allocated 40,000 bales, a record allocation for one week's time. Reports from Alexandria state that holdings of the last crop there total 152,764 bales of steam pressed, and about 5,000 bales of hydraulic pressed cotton left, of which stock of steam pressed cotton 18,299 bales are linters. Little cotton is arriving in Alexandria from the interior of Egypt, the growers preferring to hold their remaining stocks for a few months in anticipation of higher prices later on in the season.

FABRICS

Activity in the various fabrics markets is steadily expanding, and the markets are all strongly held. Export demand is strong, inquiries coming from practically all parts of the world, and with the resumption of trading with Germany under blanket licenses, demand is expected to be heavily increased, when Germany has established sufficient financial credits in this country. The Government at the present time is selling large quantities of denims, gauze, and other fabrics, disposing of much of its surplus holdings to the regular trades.

TIRE FABRICS

Demand for tire fabrics is reported as fairly active, and the shortage of Sea Island yarns is expected to be reflected in the supplies of fabrics made from this material. Manufacturers of the fabrics are

expected to use considerable quantities of American-grown Egyptian cotton in the near future. Tire makers are reported to be operating right along, storing their product against a future heavy demand, and thus the call for tire fabrics continues fairly active along routine lines.

HOSE AND BELTING FABRICS

Demand for hose and belting fabrics is fairly strong at the moment, manufacturers of mechanicals booking a fair volume of business for both domestic and export account. Railroads are not purchasing rubber goods in any large quantities, supplies being pooled by the various railroads under the Government control. The supplies held by the various roads are reported to be very low, however, and a large business is looked for when the roads finally are forced into the market to replenish stocks. Export demand is steadily on the increase, belting selling fairly well for export. Inquiries are coming in from France, Belgium, and South America, while Germany is expected to be a heavy purchaser within a short time. Factories in the devastated sections of France and Germany are heavy buyers.

TIRE FABRICS

17¼-ounce Sea Island, combed, sq. yd.	1.40@1.55
17¼-ounce Egyptian, combed	1.20@1.30
17¼-ounce Egyptian, carded	Nominal
17¼-ounce Peelers, carded	.85@ .90
17¼-ounce Peelers, combed	1.05@1.15

DUCKS

Single Filling (pound basis)	lb.	Nominal
Double Filling (pound basis)		Nominal

DRILLS

37-inch	2.35-yard	yd.	.24 @	
37-inch	2.75-yard		.22¼ @	
37-inch	3.00-yard		.22½ @	
37-inch	3.25-yard		.21 @	
37-inch	3.50-yard		@	
37-inch	3.95-yard		@	
37-inch	2.00-yard Southern		@	
37-inch	2.00-yard Northern		@	
40-inch	2.40-yard Southern		@	
40-inch	2.40-yard Northern		@	
52-inch	1.90-yard Southern		@	
52-inch	1.90-yard Northern		@	

SHEETINGS

40-inch	2.35-yard	yd.	.26 @	.26½
40-inch	2.50-yard		.26 @	
40-inch	2.85-yard		.24½ @	
40-inch	3.00-yard		.23 @	.23½
40-inch	3.25-yard		.22½ @	.23
40-inch	3.75-yard		.19 @	
40-inch	3.60-yard		.20 @	
40-inch	4.25-yard		.17 @	

Note.—In view of the unsettled conditions prevailing in the market at the present time, the prices quoted above are more or less nominal, and are not guaranteed.

BURLAPS
(Carload lots)

		Per Yard
7 -ounce	40-inch	Nominal
7½-ounce	40-inch	10.50@
7½-ounce	45-inch	Nominal
8 -ounce	36-inch	@
8 -ounce	40-inch	13.50@ 14.00
8½-ounce	40-inch	@
10 -ounce	36-inch	@
10 -ounce	40-inch	14.50@ 14.75
10 -ounce	45-inch	Nominal
10½-ounce	40-inch	15.00@ 15.75

Chemicals and Compounding Materials

NEW YORK, July 22, 1919.

Business has been improving steadily in all branches of the chemical and compounding materials markets since our last report, and the market has been generally a strong one, although a few price recessions have been noted. The position of the oils markets has again been notably strong, and prices have been moved up throughout the market, linseed oil in particular being strong, advancing to $2.18 and $2.23 in barrels on the spot, while spot oil in carloads is held at $2.12 to $2.17 and in tank cars at $2.07 to $2.12. All of these prices are nominal, however, practically no spot oil being obtainable at the time of writing. Crude corn oil has also been advanced from 21 cents to 24 to 25½ cents per pound, while the refined variety has moved up to 28 and 28½ cents. Lagos palm oil is also stronger. The position of the turpentine market has also displayed firmness in all quarters, pure gum spirits selling up to $1.12½ cents per gallon, while the wood is held at $1.02 and $1.02½.

LITHARGE

Demand has improved somewhat, and the market is firmly held at 9¾ to 10½ cents per pound for the American powdered in casks. The market is generally well sold up, and producers have no accumulated stocks on hand. The export demand is not very firm at the present time, and quantity prices remain unchanged on the established basis.

LITHOPONE

Demand has cleared up stocks of lithopone, and some producers are asking ½ cent per pound above the market. This advance has not been a general one, however, and is credited with producers who are well sold up and are taking this method of shutting off further business. Lithopone manufacturers are heavy buyers of crude barytes at the present time, and are reported to be having some difficulty in obtaining adequate supplies of the raw materials. Export demand for lithopone is heavy, but producers are able to take on only a small quantity of business for foreign account. A feature of the market last week was the offering of re-sale lots of lithopone at ¼ cent below the market.

BARYTES

A strong call for barytes has developed, and producers are swamped with the volume of business offered, many declaring that they have booked enough business to take care of production for some time to come, and refusing to accept any further orders. While the main factor of interest is the steady call from the lithopone manufacturrs, and other elements of the domestic trade, there is also a heavy call for the American barytes coming in from Great Britain and France, where the consumers have found the American product to be both superior and more economical than the Spanish variety.

ZINC OXIDE

A strong consuming demand for zinc oxide is reported, and the market continues unchanged at the established basis. Producers are accepting orders at present prices for the remainder of the year, and the general impression in the trade is that there will be no alteration of the price until Jan. 1, 1920, unless some unforeseen developments should force the manufacturers to mark up the price of their product. With the improvement in the quality of zinc oxide produced in this country, the export demand is constantly widening in scope, and at the present time, there is a heavy call from foreign countries.

Prices Current for Chemicals, Fillers, Colors, etc.

Acetone, in drums	lb.	.15½ @	—
Accelerator, in drums	lb.	.85 @	1.00
Acids, Acetic, 56%	cwt.	6.00 @	6.50
Carbolic, C. P.	lb.	.18 @	.19
*Cresylic, C. P.	lb.	1.10 @	1.15
Muriatic, 20 deg.	lb.	1.20 @	1.40
Muriatic, 22 deg.	cwt.	1.40 @	1.60
Nitric, 42 deg.	cwt.	7.00 @	8.00
Nitric, 40 deg.	cwt.	6.75 @	7.50
Sulphuric, 60 deg.	ton	12.00 @	15.00
Tartaric, crystals	lb.	.86½ @	—
Aluminum Flake	ton	29.00 @	31.00
Aniline oil, bulk basis, Contract		.24 @	—
Imported		Nominal	
Antimony, metal spot	lb.	8.75 @	—
Oxide	lb.	.08½ @	.12
Sulphuret, red	lb.	.20 @	.21
Sulphuret, golden	lb.	.21 @	.22
Sulphuret, crimson	lb.	.35 @	.40
Asbestos	ton	35.00 @	45.00
Asphaltum, Egyptian	lb.	.20 @	.30
Domestic	ton	22.00 @	30.00
Barium sulphate, technical	lb.	.04½ @	.05
Sulphide	lb.	07¼ @	.07½
Barytes; prime white imported	ton	Nominal	
white, domestic	lb.	.30 @	.31
off color, domestic	lb.	.21 @	.24
Southern, f.o.b. mills		21.00 @	—
Western, f.o.b. mills		21.50 @	—
Benzol, pure, bulk	gal.	.22 @	.27
Beta-naphtol, sublimed	lb.	.55 @	.65
unsublimed	lb.	.50 @	.62
Blacks, Drop	lb.	.05½ @	.15
Ivory	lb.	.16 @	.30
Carbon, gas, cases	lb.	.12 @	.25
Lampblack, R. M.	lb.	.15 @	.45
Mineral blacks	ton	35.00 @	45.00
Blues, Prussian	lb.	.65 @	.75
Soluble	lb.	.68 @	.78
Ultramarine	lb.	.12 @	.40
Browns, Umber, Turkey, burnt, powdered	lb.	.05 @	.06½
American, burnt	lb.	.03½ @	.04
Cadmium sulphide, yellow	lb.	2.00 @	2.25
Carbon, disulphide, bulk	lb.	.07 @	.07½
tetrachloride drums	lb.	.13½ @	.14
Caustic Soda, 76@78%	cwt.	3.00 @	3.20
Chalk, precipitated, extra light	lb.	.05½ @	.06½
light	lb.	.05 @	.06
heavy	lb.	.05½ @	.06
China clay, domestic	ton	8.50 @	20.00
imported	ton	19.00 @	23.50
Fossil flour	lb.	.03¾ @	.05
Gilsonite	ton	47.50 @	60.00
Glue, extra white	lb.	.35 @	.40
medium	lb.	.30 @	.35
low grade		.20 @	.25
Glycerine, C. P. (drums)	lb.	.19½ @	—
cans		.21 @	—
second hands		.19¼ @	.19½
Graphite, flake (bbl.)	lb.	.14 @	.25
powdered (bbl.)	lb.	.05 @	.10
Green, chrome, R. M.	lb.	.35 @	.40
Ground glass (fine)	lb.	.03½ @	.04
Hexamethylene	lb.	.90 @	1.00
Infusorial earth, powd'd.	lb.	.02 @	.035
bolted	lb.	.035 @	—
Iron oxide, red, reduced grades	lb.	.07 @	.08
red, pure, bright	lb.	.15 @	.20
Lead, red, dry (casks)	lb.	.10¼ @	.10½
sublimed	lb.	.09¾ @	.09¾
white, basic carb.	lb.	.09 @	.09½
white, basic sulp.	lb.	.08¼ @	.08½
Lime flour	lb.	.01¾ @	.02
Litharge (casks)	lb.	.09¾ @	.10½
English	lb.	.12 @	.13
Lithopone, domestic, bbls.	lb.	.06½ @	—
in bags		.06¾ @	—
Magnesia, carbonate	lb.	.12½ @	.13½
calcined, heavy	lb.	.12 @	.14
calcined light	lb.	.65 @	.75
Magnesite, calcined, pwd.	ton	65.00 @	—
Mica, powdered	lb.	.04¾ @	.05
Mineral rubber (asphaltum base)	ton	80.00 @	115.00
Naphtha, motor gasoline, (steel bbls.)	gal.	.23½ @	—
68 @ 70 degrees (steel bbls.)	gal.	.30½ @	—
70 @ 72 degrees (steel bbls.)	gal.	.31½ @	—
73 @ 76 degrees (steel bbls.)	gal.	.33½ @	—
machine (wood bbls.)	gal.	.36½ @	—
Oil corn, crude	lb.	.24 @	.25½
corn, refined	lb.	.28 @	.28½
linseed (bbls.) spot		2.18 @	2.23
linseed (bbls.) Nov.-May		1.98 @	—
in carloads		2.12 @	2.17
tank cars		2.07 @	2.12
Oil palm, Lagos	lb.	.18½ @	—
Niger		.16 @	.16¼
pine, yellow	gal.	.79 @	—
rapeseed, refined	gal.	1.50 @	1.55
rapeseed, blown	gal.	1.60 @	1.65
rosin, first rectified	gal.	.85 @	—
second run		.87 @	—
tar (commercial)	gal.	.45 @	—
Orange mineral, American	lb.	.13¼ @	.14¼
imported	lb.	.15 @	.20
Paraphenylenediamme	lb.	2.75 @	3.00
Petrolatum, bbls., amber	lb.	.07½ @	.08
pale yellow		.06 @	.07
Pine tar kiln	bbl	12.00 @	12.50
Pitch	bbl.	8.00 @	8.25
Plaster of paris	bbl.	2.00 @	3.00
Red Tuscan	lb.	.22 @	.30
Indian (reduced)	lb.	.14 @	.16
Standard	lb.	.12 @	.16

Rosin (common to good)—			
280 lbs .....bbl.	16.50	@	—
Rotten stone, powdered..lb.	.02½	@	.04½
Rubber, substitute, black..lb.	.13	@	.17
white .....lb.	.15	@	.24
brown .....lb.	.20	@	.25
Shellac, fine orange.....lb.	—	@	—
T. N. .....lb.	.85	@	—
Bleached ordinary..lb.	.85	@	—
Bleached bonedry...lb.	1.35	@	—
Silex (silica).....ton	22.00	@	40.00
Soapstone, powdered...ton	12.00	@	17.50
Starch, corn, powdered..lb.	6.02	@	6.50
pearl	5.87	@	6.35
Sulphur, crude.....ton	*50.00	@	—
100 pounds.....	3.20	@	4.25
roll	2.70	@	3.15
commercial superfine..	2.50	@	—
Talc, American.....ton	20.00	@	40.00
French .....ton	*30.00	@	35.00
Toluol, pure, in drums..gal.	.25	@	.30
commercial	.22	@	.27
Tripolite earth .....lb.	.01½	@	—
Turpentine, pure gum—			
spirits .....gal.	1.12½	@	—
wood .....gal.	1.02	@	1.02½
Venice, artificial .....gal.	13	@	.13½
true	4.50	@	—
Vermilion, English .....lb.	1.60	@	—
American	.25	@	.30
Wax, beeswax, crude yel.lb.	.45	@	.46
refined	.46	@	.47
ceresin, white .....lb.	.22	@	.26
yellow	.18	@	.22
carnauba, No. 3.....lb.	.52	@	.55
Montan, crude ....lb.	.35	@	.36
ozokerite, black.....lb.	*.60	@	.61
ozokerite, green.....lb.	Nominal		
candelilla	.31	@	.33
Wax, Paraffin, refined, 118/120 M. P. (bbls.) .lb.	.07½	@	.08
Paraffin, 125/127 M. P. .....lb.	.08½	@	—
Wax, Paraffin, 128/130 M. P. .....lb.	.09	@	.09¼
133/135 M.P.....lb.	.10½	@	.11
Crude, 120/122 M.P..lb.	.10¾	@	—
124/126 M.P.....lb.	.10½	@	.10¾
Whiting, commercial...cwt.	1.15	@	1.20
Alba .....cwt.	1.25	@	—
Paris, white, American .....cwt.	1.50	@	—
English cliffstone.cwt.	1.75	@	2.50
Yellow chrome C. P....lb.	.24	@	—
†Zinc oxide, States Brand.	.10	@	—
horsehead brand....lt.	†.10	@	.10¼
Zinc—selected .....lb.	†.09½	@	—
"XX red".....lb.	†.09	@	—
French process, green seal .....lb.	†.10½	@	—
red seal.....lb.	†.09¼	@	—
white seal.....lb.	†.11½	@	—
substitutes .....ton	35.00	@	40.00
sulphate, pure.....lb.	*.04	@	.04¼

* Nominal. † Contract prices.

Crude Rubber

NEW YORK, July 22, 1919.

Continued weakness has featured the market for crude rubber during the past fortnight, and trading has been generally dull with the undercurrent of feeling distinctly easy. Prices below are by no means firm, buyers having little difficulty in obtaining price recessions on most varieties. The spot market is almost entirely neglected, with rubber coming in on contracts covering the bulk of the requirements of tire manufacturers and other rubber consumers. The demoralized condition of the sterling exchange market is holding back business in the futures market.

Para up-river fine is quoted a trifle lower at 55½ cents per pound, while Caucho ball is quoted 1 cent down at 33 cents. Ceylons are quoted materially lower throughout, while the position of the various Centrals remains nominally unchanged.

	Cents per pound.		
Para—Up-river fine	55½	@	....
Up-river medium	52	@	....
Up-river coarse	33½	@	34
Caucho ball	38	@	38½
Islands fine	48	@	....
Islands coarse	21½	@	....
Cameta	22½	@	....
Madeira fine	62	@	....
Knapsack	73	@	....
Ceylons—Smoked sheets, ribbed.	38	@	38½
Smoked sheets, plain.....	37	@	....
First latex pale crepe.....	39	@	39½
Amber crepe	Nominal.		
Clean brown crepe.....	54	@	....
Rio Nunez string.....	55	@	....
Palembang	14	@	....
African	33	@	....
Prime Surinam sheets.....	1.07½	@	....
Centrals—Corinto prime	34	@	....
Esmeralda, prime	34	@	....
Mexican scrap.....	25	@	....
Balata sheets.....	57	@	....
Guayule, wet	25	@	....
Balata, block	57	@	....

Scrap Rubber

NEW YORK, July 22, 1919.

Although demand still is quiet, dealers profess to believe that a turn in the tide is at hand. While reclaimers are set against paying present prices for scrap, seeing that crude rubber is so cheap, sentiment is buoyed by the increased inquiries that have been received from Germany and Holland. Considerable quantities of auto tubes are being held in the warehouses of the United States for shipment to France. Many of these tubes have been here since the war started. When freights and exchange rates return to more propitious levels, dealers in scrap anticipate getting a broader demand.

The following are averages of dealers' sales prices in New York:

Boots and shoes.....	7.00	@	7.10
Arctics, trimmed	5.00	@	5.50
Arctics, untrimmed	4.25	@	4.75
Tires—Automobile	3.25	@	4.00
Bicycles, pneumatic	2.25	@	2.50
Mixed hose	1.00	@	1.25
Air brake	2.50	@	2.75
Inner tubes, No. 1.....	17.00	@	17.50
Inner tubes, No. 2.....	9.00	@	9.50

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American Rubber Patents

ISSUED JULY 1, 1919.

1,308,037—To Joseph Buchek, Oak Park, Ill. SafetyValve., Mechanism and Pressure-Gage.

1,308,057—To William J. Edwards, Fluvanna, Tex. Antislipping Device for Tires.

1,308,111—To Joseph Porzel, Buffalo, N. Y., assignor to City Trust Company, Buffalo, N. Y. Vulcanizing-Machine.

1,308,132—To Harry A. Welton and Homer J. Hoyt, Detroit, Mich., assignors to Morgan & Wright. Attachment for Plastic-Mixing Mills.

1,308,219—To Ferdinand Francis Brucker, Akron, Ohio. Valve-Fishing Tool.

1,308,231—To Richard F. Dyer, Providence, R. I., assignor to George H. Gabb, Bloomfield, Conn. Artificial Leather and Method of Producing it.

1,308,292—To George McNeill, Detroit, Mich., assignor to Morgan & Wright. Bead-Drying Apparatus.

1,308,416—To Charles H. Gunn, Emeryville, Calif. Tire Construction for Vehicle-Wheels.

1,308,434—To John W. McKenzie, Bay City, Mich. Tire Attachment.

1,308,455—To Irwin C. Stroth, Wellston, Ohio. Antiskid Device.

1,308,517—To John K. Williams, Akron, Ohio, assignor to The Williams Foundry and Machine Co., Akron, Ohio. Vulcanizer.

1,308,616—To Edmond J. Bergman, Vincennes, Ind. Demountable-Rim Fastener.

1,308,633—To James A. Horne, Washington, D. C. Resilient Tire.

1,308,650—To Baxter C. Wilson, West Marion, S. C. Gasket-Cutter.

1,308,705—To Joseph Gajan, New York, N. Y. Non-Skid Attachment for Wheels.

ISSUED JULY 8, 1918.

1,308,761—To Gustavo Lescano, Habana, Cuba. Resilient Wheel for Vehicles.

1,308,777—To Byron E. Eldred and Gail Mersereau, New York, N. Y., assignors to Chemical Development Company. Process of Regulating Catalysis.

1,308,834—To James W. Arthur, Akron, Ohio, assignor to The Williams Foundry & Machine Company, Akron, Ohio. Vulcanizing Apparatus.

1,308,846—To Furney F. Green, Colgate, Okla. Tire.

1,308,908—To Zachary Kutchuk, Southwest, Pa. Spring-Tire.

1,309,047—To Raymond B. Price, New York, N. Y., assignor by mesne assignments to The Goodyear Metallic Rubber Shoe Company, Naugatuck, Conn. Rubber Footwear.

1,309,058—To James Whyte Arthur, Warren, Ohio. Tire-Casing Holder and Shifter.

1,309,215—To Frederik Nielsen, Dorchester, Mass., assignor to A. Schrader's Son Incorporated, Brooklyn, N. Y. Dust-Cap.

1,309,249—To John H. Grube, Los Angeles, Cal., assignor to Airsafe Inner Tire Company, Los Angeles, Cal. Tire-Liner.

1,309,268—To John V. Whitbeck, Cleveland, Ohio, assignor to Chandler Motor Car Company, Cleveland, Ohio. Tire-Carrier.

1,309,308—To James A. Swinehart, Akron, Ohio. Vehicle-Tire.

1,309,424—To Frank A. Seiberling, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio. Fabric-Forming Apparatus.

1,309,440—To Henry M. Lambert, Portland, Ore., assignor to Lambert Tire and Rubber Company, Portland, Ore. Tire-Thread.

1,309,460—To Burpie E. Chute, Tucson, Ariz. Cushion-Tire for Vehicles.

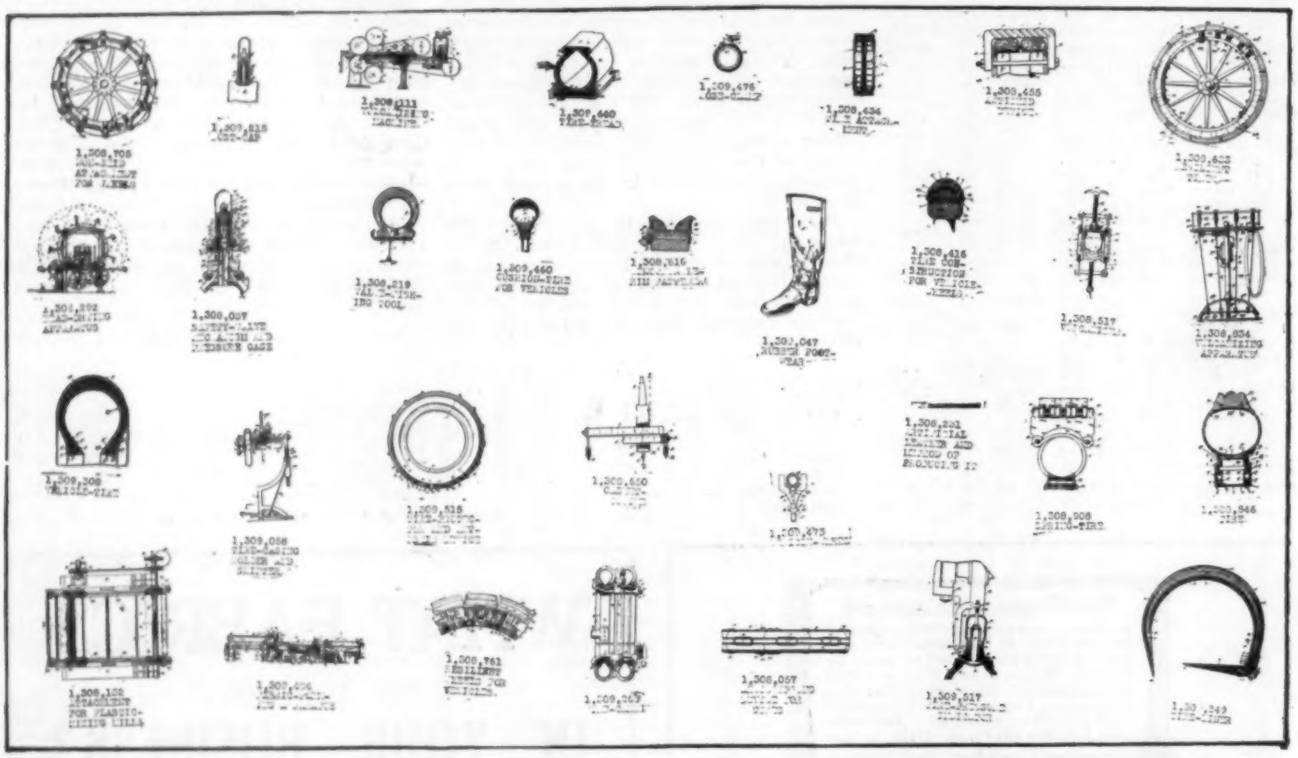
1,309,473—To George R. Farrell, Detroit, Mich. Vehicle-Wheel.

1,309,476—To Thomas Hill, New York, N. Y. Hose-Clamp.

1,309,485—To Raymond B. Price, Mishawaka, Ind., assignor by mesne assignments to the Goodyear Metallic Rubber Shoe Company, Naugatuck, Conn. Method of treating vulcanizing plastics.

1,309,515—To William B. Estes, Sr., Newark, N. J., assignor of one-fourth to A. Lyons, Newark, N. J. Tire-Protector and Anti-skid device.

1,309,517—To Benjamin G. Gilbough, Los Angeles, Cal. Tire-Pressure Indicator.



New Incorporations

Rialto Tire & Rubber Company, Inc., capital $20,000, New York City; to manufacture tires and tubes. Incorporators: Joel Jacobs and others.

Hudson Rubber Company, Cleveland, Ohio; capital $100,000. Incorporators: J. R. Goslee and others.

The McElroth Tire & Rubber Company, Cleveland, Ohio; increased capital from $15,000 to $515,000.

Hercules Tire & Rubber Company, Cleveland, Ohio; capital $20,000. Incorporators: Edward M. Crawford and others.

Valentine Rubber & Supply Company, Cleveland, Ohio; capital $25,000. Incorporators: R. F. Valentine and others.

Universal Rubber Products Company, Wilmington, Del.; $2,000,000. Incorporators: T. L. Croteau, P. B. Drew, C. L. Rimlinger, Wilmington, Del.

Conestoga Tire & Rubber Company, Lancaster, Pa.; capital $25,000. Incorporators: A. R. Trump and others, to deal in tires and automobiles.

S. A. C. G. Tire & Rubber Company, Buffalo, N. Y.; capital $250,000. Incorporators: A. Gerace, F. C. Lombardo, C. Lombardo.

Stanley Tire & Rubber Company, New York City, to retread and manufacture tires and other rubber goods; capital $50,000. Incorporators: Stanley Newman and others.

Fordcord Rubber Company, Augusta, Maine; capital $2,000,000, of which $1,000,000 preferred and $1,000,000 common. President and treasurer, E. M. Leavitt; clerk, Ernest L. McLean, Augusta; directors: E. M. Leavitt, Ernest L. McLean, S. L. Fogg and M. Y. Marston, all of Augusta. Purpose: general manufacturing and mercantile business.

Pennsylvania Pushing Exports

The Pennsylvania Rubber Company, Jeannette, Pa., has opened an office in the Woolworth Building, New York City, for its export department. D. D. F. Yard, sales director of the export division, will sail from San Francisco about July 1 for Honolulu, en route to Australia, Straits Settlement, New Zealand, China, Japan, India and South Africa to further the companys' interests. R. W. Palm, South American representative, will sail July 1 on his second trip to Latin America, where Pennsylvania Vacuum Cup tires and Ton-Tested inner tubes already are being handled by well established agents. F. B. Beck will be in charge of the New York office during Mr. Yards' absence.

Ground Cleared for Norwalk's Factory

In preparation for the erection of the extensive additions to the factory of the Norwalk Tire & Rubber Company, at Norwalk, Conn., several old buildings on Belden Hill Avenue are being razed or removed from the site. The property was purchased several weeks ago and the dwelling houses sold to private individuals. Many of the buildings have been torn down already and the lumber carried away in trucks. Work on the new tennis courts on Main Avenue to the east of the factory is well under way and is attracting much attention from the members of the Norwalk Tire & Rubber Company Tennis Club which is planning to open a series of matches on the courts when these are finished.